University of Minnesota - Course Guide for Twin Cities Campus  Fall 2011

AHS 1101 Orientation to Health Careers
OPT No Aud, 1 credit(s); Credit will not be granted if credit has been received for: AHS 1102;
Instructor: Simpson, Scott W
Description: This one credit course is designed for students interested in exploring the many career paths available in health care. Students will have the opportunity to reflect on their own values, skills and interests. You will also hear first-hand from an extensive line-up of guest speakers and learn more about the academic and experiential requirements for health professional schools at the University. Activities will include interest inventories, discussion, journaling, developing an action plan, and other reflective assignments. This course will help you decide if a career in the health professions is a good fit for you.

AHS 1102 Orientation to Health Careers
OPT No Aud, 1 credit(s); Credit will not be granted if credit has been received for: AHS 1101;
Instructor: Kachgal PhD,Mera
Description: This Web-based, one credit course is for undergraduate students who are exploring health majors and professions. Students will have the opportunity to reflect on their own values, skills and interests. You will learn more about the academic and experiential requirements for health professional schools at the University. Activities will include interest inventories, discussion, journaling, developing an action plan, and other reflective assignments. This course will help you decide if a career in the health professions is a good fit for you.
Style: 100% Web Based.
Grading: 33% quizzes, 33% reflection paper, 33% other evaluation.
Exam Format: multiple choice, matching, true/false, and short answer

AHS 1600 The Future Physician I: Medicine in the 21st Century
A-F only, 1 credit(s); prereq instr consent;
Instructor: Todd, Tricia
Description: Student may contact the instructor or department for information.

AHS 1602 The Future Physician III: Experiences in Health
2 credit(s); prereq [1600 or 1601], instr consent , permission number;
Instructor: Todd, Tricia
Description: Student may contact the instructor or department for information.

AHS 2300 Orientation to Clinical Research
A-F only, 1 credit(s); prereq instr consent [ referral from UMTC academic adviser or faculty member], interview, application essay, GPA of at least 3.50;
Instructor: Kachgal PhD,Mera
Description: This seminar course is intended for pre-health students who are exploring careers in clinical research. Course topics will include an introduction to the field of clinical research, ethical conduct and professionalism, and clinical research methods pertinent to dentistry, medicine, public health, pharmacy, and nursing. In addition to biweekly lectures, students will participate in a supervised field experience in which they observe clinical research practices. In addition, students will develop a clinical research proposal for the Undergraduate Research Opportunity Program (UROP).

AHS 2707H Global Health Challenges for Future Health Professionals
A-F only, 2 credit(s), max credits 8, 4 completions allowed;
Instructor: Todd, Tricia
Description: This is a two-credit course designed for freshman and sophomore students in the University Honors Program who have an interest in learning more about emerging health issues and the challenges and opportunities health professionals have as they work to address those health issues. You will hear from researchers, faculty, and practicing health professionals who are wrestling with the challenges to human and animal health and how those challenges are tied to the changing expectations and responsibilities of health professionals. The increasing, changing and expanding challenges to human health will require more broadly and highly trained health professionals in the future. This course will help you understand what you need to prepare for, and how to begin that preparation. This course is intended for freshman/sophomore students. Questions, contact the University Honors Program.

AHS 4300 Directed Study
1-3 credit(s), max credits 6; prereq instr consent ;
Instructor: Todd, Tricia
Description: Student may contact the instructor or department for information.

Accounting

ACCT 2050 Introduction to Financial Reporting
A-F only, 4 credit(s); prereq Soph; Credit will not be granted if credit has been received for: APEC 1251;
Instructor: Biondich, Nick E
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policies, including fee and financial aid restrictions. In this course, you will learn: --the nature of financial transactions; --the Generally Accepted Accounting Principles (GAAP) that businesses and nonprofit organizations in the U.S. must follow in reporting these transactions; --the vocabulary of financial accounting, sometimes described as the language of business; and --the representations made by financial statements. As you learn the fundamentals of accounting, you will gradually discern many areas that will affect you throughout your life. Whenever your corporate employer describes its financial goals, whenever you observe the stock market reacting to a corporation’s earnings, whenever you learn about how a financially troubled company is taking steps to increase its profitability, accounting information is involved. This course will help you increase your understanding of events that take place daily in the financial community.
Style: Online with handwritten exams
Grading: 30% mid exam, 35% final exam, 35% written homework.
Exam Format: Supervised, in-person (not online) exams

ACCT 2050 Introduction to Financial Reporting
A-F only, 4 credit(s); prereq Soph; Credit will not be granted if credit has been received for: APEC 1251;
Instructor: Caliendo, Charles Michael
Description: Student may contact the instructor or department for information.
ACCT 2050 Introduction to Financial Reporting
A-F only, 4 credit(s); prereq Soph; Credit will not be granted if credit has been received for: APEC 1251;
Instructor: White, Paul Andrew
Description: Student may contact the instructor or department for information.

ACCT 2050 Introduction to Financial Reporting
A-F only, 4 credit(s); prereq Soph; Credit will not be granted if credit has been received for: APEC 1251;
Instructor: Jung, Sumi
Description: Student may contact the instructor or department for information.

ACCT 2050 Introduction to Financial Reporting
A-F only, 4 credit(s); prereq Soph; Credit will not be granted if credit has been received for: APEC 1251;
Instructor: Dal, Xin
Description: Student may contact the instructor or department for information.

ACCT 2050H Honors: Introduction to Financial Reporting
A-F only, 4 credit(s);
Instructor: White, Paul Andrew
Description: This course introduces the topic of financial accounting for U.S. organizations. The purpose of financial accounting is to provide information to owners of the firm and other interested parties to serve as the basis for making decisions about that firm. The student who successfully completes this class will be able to read and understand U.S. financial statements. This course is unusual in that it covers in one semester material that is more commonly covered in two semester courses or one and a half semester courses. The benefit to this is that the student can get a lot of education for the time and tuition dollar. Also, packing the introductory accounting into one semester frees up time and credit hours that can be used on elective courses. The cost to the student is obvious; this course moves quickly and you must be willing to put in extra time and effort in order to take advantage of this saving. The purpose of this class is to introduce accounting, which is both the language of business and its primary information system. The learning goal is that students be able to read and understand U.S. financial statements. By the end of the course, the student should be able to prepare basic financial statements including the cash flow statement and to read and interpret annual financial reports.
Style: 50% Lecture, 20% Discussion, 30% Small Group Activities.
Grading: 40% mid exam, 20% final exam, 8% special projects, 16% quizzes, 3% written homework, 13% class participation.

ACCT 3001 Introduction to Management Accounting
A-F only, 3 credit(s); prereq 2050;
Instructor: Caliendo, Charles Michael
Description: Student may contact the instructor or department for information.

ACCT 3001 Introduction to Management Accounting
A-F only, 3 credit(s); prereq 2050;
Instructor: Khan, Mozaffar
Description: Student may contact the instructor or department for information.

ACCT 3201 Intermediate Management Accounting
A-F only, 2 credit(s); prereq 3001, acct or finance major;
Instructor: White, Paul Andrew
Description: This course continues the topic of management accounting in greater depth. The purpose of management accounting is to provide information to management for costing products, as well as for planning, controlling, and evaluating business activities. The purpose of this class is to expand and build on the topics introduced in ACCT3001. The course will hone and refine the tools and techniques learned in introductory management accounting classes as well as improve your decision-making skills. We will also explore several topics not covered in the introductory class as well as consider how

management accounting supports overall business strategy.
Style: 10% Lecture, 45% Discussion, 45% Student Presentation.
Grading: 35% final exam, 27% written homework, 20% in-class presentation, 20% class participation.

ACCT 5101 Intermediate Accounting I
A-F only, 4 credit(s); prereq Grade of at least B- in 2050, [mgmt major or mgmt grad student];
Instructor: Biorldich, Nick E
Description: Student may contact the instructor or department for information.

ACCT 5101 Intermediate Accounting I
A-F only, 4 credit(s); prereq Grade of at least B- in 2050, [mgmt major or mgmt grad student];
Instructor: Shroff, Pervin Keki
Description: This course is designed for undergraduate students majoring in accounting. The course begins with an overview of the historical, conceptual, and theoretical bases of financial accounting and a review of the principal financial statements. It provides an extensive examination of income measurement and accounting issues related to assets. Accounting for liabilities and owners' equity and the more technically difficult topics, such as leases, pensions, and deferred taxes, are the subject matter of the next course in the accounting sequence. Text: "Intermediate Accounting", 9th edition, Kieso and Weygandt.
Style: 70% Lecture, 30% Discussion.
Grading: 40% mid exam, 35% final exam, 8% special projects, 10% quizzes, 7% problem solving.
Exam Format: problem solving

ACCT 5101 Intermediate Accounting I
A-F only, 4 credit(s); prereq Grade of at least B- in 2050, [mgmt major or mgmt grad student];
Instructor: Forester, Clayton L
Description: Student may contact the instructor or department for information.

ACCT 5102W Intermediate Accounting II
A-F only, 4 credit(s); prereq 5101 [mgmt major or grad mgmt student]; Meets CLE req of Writing Intensive;
Instructor: Tranier, Terry L
Description: Students in class are juniors, seniors, and master's students. While most students are accounting majors, the course is also valuable for students in finance. The class covers the valuation of liabilities and owners' equity accounts, as well as cashflow statements and earnings per share calculations. Students need a thorough background in financial accounting and present value calculations to do well in Acct 5102.
Style: 100% Lecture.
Grading: 47% mid exam, 25% final exam, 19% reports/papers, 9% other evaluation.
Exam Format: Open-ended questions 85+%; essays 10-15%; 4-6 questions per exam; exams are long and run the full class period

ACCT 5125 Auditing Principles and Procedures
A-F only, 4 credit(s); prereq [3101 or 5101 or 5100 or 6100], [acct major or grad mgmt student];
Instructor: Bell, Frank J
Description: Student may contact the instructor or department for information.

ACCT 5135 Fundamentals of Federal Income Tax
A-F only, 4 credit(s); prereq [2050 or MBA 6030], [mgmt or grad mgmt student];
Instructor: Guterman, Paul Gerard
Description: The course objectives are as follows: 1) to provide a historical perspective with respect to the system of income taxation in general and with respect to various specific provisions within the system; 2) to examine the interrelationships between legislative authority (the Internal Revenue Code), judicial and administrative authority; 3) to analyze the structure of the Internal Revenue Code and its provisions with respect to specific areas of the law, primarily with regard to the taxation of individuals; 4)
to introduce the reading of case law and other tax authority; and 5) to provide a basic knowledge of tax research tools and techniques. The student will not be a tax expert on completion of the course, but will be familiar with fundamental income tax rules, primarily with respect to individuals, and how the federal tax system works. Although this course is a requirement for undergraduate accounting majors, only a minimal accounting understanding is required as a prerequisite and non-accounting majors are welcome.

Style: 60% Lecture, 15% Discussion. Problems
Grading: 53% mid exam, 30% final exam. 17% special projects.
Exam Format: multiple choice, short essay

ACCT 5135 Fundamentals of Federal Income Tax
A-F only, 4 credit(s); prereq [2050 or MBA 6030], [mgmt or grad mgmt student];
Instructor: Naples, Tammy
Description: Student may contact the instructor or department for information.

ACCT 5160 Financial Statement Analysis
A-F only, 2 credit(s); prereq [5100/6100 or 3101/5101], [accounting or finance major];
Instructor: Bell, Frank J
Description: Student may contact the instructor or department for information.

ACCT 5236 Introduction to Taxation of Business
A-F only, 2 credit(s); prereq 5135, acct major;
Instructor: Guterman, Paul Gerard
Description: Also known as "Tax 2,"this course is a continuation and building upon the fundamental tax principles learned in Acct 5135. Whereas the first tax course focused on individual taxation, this course is intended as a broad overview of entity taxation. Specifically it is a survey to the income tax laws governing the taxation of corporations, partnerships, limited liability companies, limited liability partnerships, and S corporations. The course will also build upon and increase the student's knowledge and skills relating to tax research by requiring the writing of two research memorandums.
Style: 60% Lecture, 15% Discussion. Problems
Grading: 40% mid exam, 40% final exam, 20% other evaluation.
Exam Format: multiple choice + short essay

ACCT 5310 International Accounting
A-F only, 2 credit(s); prereq 5101; [5102 or Concurrent registration is required (or allowed) in 5102] recommended;
Instructor: Raybum, Judy Ann
Description: Student may contact the instructor or department for information.

ACCT 6100 Financial Statement Analysis
A-F only, 4 credit(s); prereq MBA 6030, MBA student;
Instructor: Gu, Zhaoyang
Description: Student may contact the instructor or department for information.

ACCT 8001 Internal Control
A-F only, 4 credit(s); prereq MAcc grad major;
Instructor: Kalio, Larry Rodger
Description: Student may contact the instructor or department for information.

ACCT 8002 Securities and Exchange Commission (SEC) and Standard Setting
A-F only, 4 credit(s); prereq MAcc grad major;
Instructor: Kalio, Larry Rodger
Description: Student may contact the instructor or department for information.

ACCT 8811 Information Economics I
4 credit(s); prereq Business admin PhD student or instr consent;
Instructor: Shroff, Pervin Keki
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
ADDS 5004 Co-Occurring Addictive and Mental Health Disorders
A-F only, 2 credit(s); prereq Cannot be taken for cr by MSW students;
Instructor: Van Cleve, Michael
Description: This is a fully online section offered through Online and Distance Learning (ODL) College of Continuing Education. Visit "Class URL" for ODL policies, including fee and financial aid information. The purpose of this course is to familiarize clinical practitioners with the relationship between mental disorders and substance abuse, the characteristics of the most common mental disorders, and the methods used to treat individuals who have co-occurring conditions. The course will describe how mental health disorders interact with substance abuse disorders, the medications that are used to treat these conditions, and the community resources that can be helpful for these clients. It will also discuss approaches to assessment and counseling, including the use of the DSM-IV-TR. The goal of this course is to improve your ability to work with this population by broadening your knowledge and skills in the areas of assessment, treatment planning, and evidence-based treatment interventions.
Style: 100% Web Based.
Grading: --self-introduction: 1% --5 discussions: 9% --12 quizzes: 30% --2 exams: 60%

ADDS 5005 Group Therapy: Theory and Practice
3 credit(s);
Instructor: Rohovit PhD, Julie Lynn
Description: Group Therapy: Theory And Practice is a graduate level course designed to introduce you to the many professional and practical issues involved with designing and facilitating ethical and effective therapy groups. The basic intra and inter-personal dynamics, practical issues, theoretical components, leadership qualities and skills, developmental aspects and ethical issues of designing and facilitating therapy groups will be discussed. Applying group skills to the therapy of chemically addicted individuals is emphasized. This course combines the use of lectures, discussion, experiential exercises, small group participation and readings to advance your cognitive, interpersonal and practical skills.

ADDS 5009 Multicultural Aspects of Addiction
2 credit(s);
Instructor: Wamsley, Debra S
Description: Student may contact the instructor or department for information.

ADDS 5011 Directed Study
1-3 credit(s), max credits 3, 1 completion allowed;
Instructor: Rohovit PhD, Julie Lynn
Description: Student may contact the instructor or department for information.

Adult Education
330 Wulling Hall

ADED 5101 Strategies for Teaching Adults
A-F only, 3 credit(s); prereq Grad student only;
Instructor: Park, Rosemarie J
Description: Student may contact the instructor or department for information.

ADED 5102 Perspectives of Adult Learning and Development
3 credit(s);
Instructor: Twohig, Catherine Carol
Description: Student may contact the instructor or department for information.

ADED 5196 Field Experience in Adult Education
S-N only, 3-6 credit(s), max credits 6, 1 completion allowed;
Instructor: Twohig, Catherine Carol
Description: Student may contact the instructor or department for information.

Aerospace Engineering and Mechanics
107 Akerman Hall

AEM 1905 Freshman Seminar: Aircraft and Spacecraft
OPT No Aud, 2 credit(s); prereq Fr;
Instructor: Flaten, James Alfred
Description: Student may contact the instructor or department for information.

AEM 2011 Statics
A-F only, 3 credit(s); prereq PHYS 2301W, [Concurrent registration is required (or allowed) in Math 2374 or equiv], CSE;
Instructor: STAFF

AEM 2012 Dynamics
A-F only, 3 credit(s); prereq 2011, [Concurrent registration is required (or allowed) in Math 2373 or equiv], CSE;
Instructor: STAFF

AEM 4000H Honors Research Seminar
S-N only, 0 credit(s); prereq Honors student, permission of University Honors Program, AEM major;
Instructor: Shield, Thomas William
Description: Student may contact the instructor or department for information.

AEM 4201 Fluid Mechanics
A-F only, 4 credit(s); prereq 2012, [Math 2373 or equiv], [Math 2374 or equiv], [CSE upper div or grad student];
Instructor: Sheng, Jian
Description: Student may contact the instructor or department for information.

AEM 4295 Problems in Fluid Mechanics
1-3 credit(s), max credits 6, 6 completions allowed; prereq dept consent;
Instructor: STAFF
Description: Topics of current interest. Individual projects with consent of faculty sponsor.

AEM 4301 Orbital Mechanics
A-F only, 3 credit(s); prereq [2012 or equiv], [Math 2373 or equiv], [CSE upper div or grad student];
Instructor: Ketema, Yohannes
Description: The two-body problem. Earth-satellite operations, rocket performance, re-entry dynamics, the space environments, the restricted three-body problem, interplanetary trajectories. Numerical simulations. Elementary spacecraft attitude control. Design project. Student may contact instructor for further information.

AEM 4321 Automatic Control Systems
A-F only, 3 credit(s); prereq [4303 or equiv or ME 3281 OR EE 3015], [CSE upper div or grad student];
Instructor: Georgiou, Tryphon T
Description: Student may contact the instructor or department for information.

AEM 4331 Aerospace Vehicle Design
A-F only, 4 credit(s); prereq [2301, 4202, AEM sr] or instr
AEM 4371 Helicopter Aerodynamics
3 credit(s); prereq 2301, 4202, 4303, [CSE upper div or grad student];
Instructor: STAFF
Description: Student may contact the instructor or department for information.

AEM 4495 Problems in Dynamics and Control
1-3 credit(s), max credits 6, 6 completions allowed; prereq dept consent;
Instructor: STAFF
Description: Topics of current interest. Individual projects with consent of faculty sponsor.

AEM 4502 Computational Structural Analysis
3 credit(s); prereq [Grade of at least C in 4501, [CSE upper div or grad student]] or instr consent;
Instructor: Elliott PhD,Ryan S.
Description: Student may contact the instructor or department for information.

AEM 4595 Problems in Mechanics and Materials
1-3 credit(s), max credits 6, 6 completions allowed; prereq dept consent;
Instructor: STAFF
Description: Topics of current interest. Individual projects with consent of faculty sponsor.

AEM 4602W Aeromechanics Laboratory
A-F only, 4 credit(s); prereq 4201, 4501, 4601, [ENG 1011 or equiv], [CSE upper div or grad]; Meets CLE req of Writing Intensive;
Instructor: Longmire, Ellen K
Description: (Writing Intensive Course) Experimental methods and design in fluid and solid mechanics. Wind tunnel and water channel experiments involving flow visualization, pressure, velocity, and force measurements. Experimental measurement of stresses, strains, and displacements in solids and structures, including stress concentrations, aerospace materials behavior and structural dynamics. Computerized data acquisition and analysis, error analysis, data reduction techniques. Experimental design, written and oral lab reports required.

AEM 5321 Modern Feedback Control
3 credit(s); prereq 4321 or EE 4231 or ME 5281 or equiv;
Instructor: Jovanovic,Mihailo
Description: Student may contact the instructor or department for information.

AEM 5401 Intermediate Dynamics
A-F only, 3 credit(s); prereq CSE upper div or grad, 2012, Math 2243;
Instructor: Ketema,Yohannes
Description: Student may contact the instructor or department for information.

AEM 5451 Optimal Estimation
A-F only, 3 credit(s); prereq [[MATH 2243 or STAT 3021 or equiv], [4321 or EE 4231 or ME 5281 or equiv]] or instr consent;
Instructor: Georgiou,Tryphon T
Description: Student may contact the instructor or department for information.

AEM 5501 Continuum Mechanics
3 credit(s); prereq CSE upper div or grad, 3031, Math 2243 or equiv or instr consent;
Instructor: Fosdick,Roger L
Description: Student may contact the instructor or department for information.

AEM 8201 Fluid Mechanics I
3 credit(s); prereq 4201 or equiv, Math 2263 or equiv;
Instructor: Sheng,Jian
Description: Student may contact the instructor or department for information.

AEM 8203 Fluid Mechanics III
3 credit(s); prereq 8202;
Instructor: Mahesh,Krishnan
Description: Student may contact the instructor or department for information.

AEM 8426 Optimization and System Sciences
A-F only, 3 credit(s); prereq 5321, CSE grad student;
Instructor: Zhao,Yiyuan J
Description: Student may contact the instructor or department for information.

AEM 8495 Advanced Topics in Aerospace Systems
A-F only, 1-4 credit(s), max credits 8, 8 completions allowed; prereq dept consent;
Instructor: STAFF
Description: The aim of the course is to learn how to exploit information contained in data collected from a dynamical system to determine mathematical models describing the system's dynamical behavior. Methods of system identification are based on the theoretical principles of systems and signals. While the focus of the course is primarily on linear dynamical systems (described by a set of linear differential equations), the course will also cover general considerations about how to treat nonlinear. The system identification principles and methods apply to a wide range of areas. Examples used in the course will cover problems from current research in aerospace (e.g. miniature helicopter, micro-air vehicle) as well as problems from other areas like robotics, neurosciences, and economics. The primary textbook used for the course is “System Identification: Theory for the User” by L. Ljung. The other texts used as references in the course are listed in the reference section.

References in the course are listed in the reference section.

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AEM 8595 Selected Topics in Mechanics and Materials  
1-4 credit(s), max credits 8, 8 completions allowed; prereq dept consent.  
Instructor: STAFF  
Description: Student may contact the instructor or department for information.

Aerospace Studies  
3 Armory

AIR 1000 Leadership Laboratory  
S-N only, 1 credit(s);  
Instructor: Worley, John E  
Description: Student may contact the instructor or department for information.

AIR 1104 Introduction to the Air Force Today I  
A-F only, 1 credit(s);  
Instructor: Cooper, Tracy Lynn  
Description: Student may contact the instructor or department for information.

AIR 1204 History of Airpower and Communication Skills  
A-F only, 1 credit(s);  
Instructor: Cooper, Tracy Lynn  
Description: Student may contact the instructor or department for information.

AIR 3301 Air Force Leadership, Quality, and Communication  
A-F only, 3 credit(s);  
Instructor: STAFF  
Description: AS 3301 is a study of leadership, quality management fundamentals, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as means of demonstrating and exercising practical application of the concepts being studied. A mandatory Leadership Laboratory (cadets only) complements this course by providing advanced leadership experiences in officer-type activities, and gives the students an opportunity to apply leadership and management principles taught in this course. Target audience in first semester meet juniors.  
Style: 45% Lecture, 30% Discussion. Video tapes  
Grading: 20% reports/papers, 40% quizzes, 20% in-class presentation, 20% class participation. 40% tests  
Exam Format: Multiple choice, T/F, short answer

AIR 3401 National Security Policy  
A-F only, 3 credit(s);  
Instructor: STAFF  
Description: AS 400 examines the national security process, regional studies, advanced leadership ethics, Air Force doctrine, and military justice. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills. A Leadership Laboratory complements this course by providing advanced leadership experiences, giving the students the opportunity to apply leadership and management principles of this course. Target audience in first semester seniors preparing to enter active duty as commissioned Second Lieutenants in the US Air Force. Classes are a combination of lecture and guided discussion. Class time: 50% lecture, 30% discussion, 20% student briefings. Work load: 70 pages of reading per week, 2 exams, 3 papers, 2 oral presentations. Exam format: essay, short answer, matching.  
Style: 50% Lecture, 30% Discussion. student briefings  
Grading: 25% mid exam, 25% final exam, 30% reports/papers, 20% in-class presentation.  
Exam Format: essay, short answer, matching

AFRO 1902 Freshman Seminar  
3 credit(s); prereq Fr; Meets CLE req of Diversity and Soc Justice US;  
Instructor: Onishi,Yuichiro  
Description: Student may contact the instructor or department for information.

AFRO 3001 West African History: Early Times to 1800  
3 credit(s); Meets CLE req of Global Perspectives;  
Instructor: Colman, Victoria Bomba  
Description: This course will examine the story of some of the people of this region, especially through the changes and developments which took place among several individual groups. The emphasis will be upon understanding well, the events of some "representative" people's histories, rather than attempting to understand what occurred in each and every group. There are too many groups and activities to study in a semester. Main themes of the course will include the family or lineage as the building block of all other institutions, the development of centralized political authority or states in West Africa, and the organization of people who did not adopt the state idea. We will examine economic developments, the spread of Islam, and the appearance of Europeans off certain coastal areas. Here a new frontier or border formed, one of hundreds in West African History. As with all other West African borders, the operational institutions of the African-European frontier were mainly being set by West African mechanisms. Until well into the nineteenth century, therefore, European (and American) traders were paying tribute and were in client, guest, or "stranger" relations with their West African patrons, hosts, or "lendards".

AFRO 3108 Black Music: A History of Jazz  
3 credit(s);  
Instructor: Williams,Yolanda Y  
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit “Class URL” for ODL policies, including fee and financial aid restrictions. The History of Jazz course looks at the development of America’s true “classical” musical form. We will trace the roots of Jazz from West Africa to the spirituals and work songs of the African slave through Blues to the first form of Jazz—New Orleans Dixieland. The other jazz forms of Swing, Bebop, and Cool through Neo-Classicism will also be studied. Because the course focuses primarily on the social, economic, and political impact on jazz, and vice versa, it is a perfect course for both the musician and the non-musician. Musicians will appreciate the developmental aspects of this once brand-new musical form and will gain a better understanding of how musical elements such as form, instrumentation, etc., and life interact and evolve.  
Style: Online  
Grading: 15% final exam, 25% special projects, 20% quizzes, 20% written homework, 20% class participation. 3 optional extra credit activities (maximum 5% of course grade)  
Exam Format: Online exam.

AFRO 3431 Early Africa and Its Global Connections  
4 credit(s); Credit will not be granted if credit has been received for: HIST 3431; Meets CLE req of Global Perspectives; meets CLE req of Historical Perspectives;  
Instructor: Pohlandt-McCormick,Helena  
Description: Student may contact the instructor or department for information.

AFRO 3597W Introduction to African American Literature and Culture I  
4 credit(s); Meets CLE req of Writing Intensive;  
Instructor: Wright,John S  
Description: AFRO/ENGL 3597W African Americans are
AFRO 3601W African Literature

3 credit(s); Meets CLE req of Global Perspectives; meets CLE req of Literature; meets CLE req of Writing Intensive;
Instructor: Gilhore, Njeri R
Description: AFRO 3601W covers both broad and specialized topics in the African literary tradition. Students should be informed that the reading and writing assignments in this class entail exceptionally detailed and sophisticated analyses of texts belonging to a literary tradition with its own unique perspective. The themes covered will be varied, multi-layered, and complex. Assigned texts will include works by authors from different parts of Africa. Course reserve readings and other extra-textual resources will be geared towards highlighting the composite issues that these texts engage with. Besides the extensive literary readings, cultural and literary theory will be of significant importance in understanding the issues that the literary texts explore. During class discussions and historical background will be surveyed in order to help illuminate crucial aspects of the societies studied, as well as to reinforce students' understanding of the texts and the dynamics in which they unfold. All this entails that students read, understand, and critically write about the material on its own terms, not any customary, usual, or prevailing way the students may be accustomed with prior to taking this class. Students enrolling in this class are expected to be knowledgeable in research methods (reference of sources, citations, writing of research papers?), basic literary vocabulary, concepts and devices. On the whole, the methodological approach to texts in this course is inspired by theoretical perspectives focusing on concepts of identity production (representation, translation, etc.), translation of reality, the relationship between text and context, language and power. Some background knowledge of these theories, while not mandatory, should prove particularly useful.

Style: 40% Lecture, 10% Film/Video, 40% Discussion, 10% Student Presentation. We watch video/films in class related to topics being explored then discuss the material viewed.
Grading: 40% reports/papers, 30% quizzes, 10% in-class presentation, 20% class participation. The assumption being that students read the assigned texts (and view films on reserve) prior to class, pop-quizzes and in class graded exercises will be given in class throughout the semester and they will constitute 20% of the final grade.
Exam Format: Two (2) of four (4) papers, each of them 6-10 pages (typed, double spaced) due on dates indicated on the syllabus. In each one of them, students will be expected to focus on a theme and develop it through careful exploration and analytical insight.

AFRO 3864 African American History: 1619 to 1865
4 credit(s); Credit will not be granted if credit has been received for: HIST 3864;
Instructor: Mayes, Keith A
Description: Student may contact the instructor or department for information.

AFRO 3866 The Civil Rights and Black Power Movement, 1954-1984
3 credit(s); Credit will not be granted if credit has been received for: AFRO 5866;
Instructor: Mayes, Keith A
Description: Student may contact the instructor or department for information.

AFRO 3910 Topics in the African Diaspora.
1-3 credit(s), max credits 9, 3 completions allowed;
Instructor: Sugnet, Charles J
Description: Special Course in conjunction with Walker Art Center?'s Retrospective Sembene Screenings Sembene is widely regarded as the founder of African cinema and a major figure in world film. The British Film Institute chose his film Xala (The Curse) for its centenary collection of the 100 best films made in cinema?'s first hundred years. Walker Art Center is doing a Sembene retrospective this fall, giving us a rare chance to view all nine of his feature films (some of them quite rare) in full 35mm projection, with various scholars introducing them and discussing them. Sembene was also a novelist, and many of the films are based on novels and short stories that he himself wrote. The class will read and study some of these literary works in order to compare them with the films they inspired, and will also view in class shorter films by Sembene that are not on the Walker program. Because Sembene?'s work deals with all the post-independence issues that still confront Africa today, the course will be of interest to students from a variety of disciplines, including literature, film studies, global studies, cultural studies, African studies, history, women?'s studies, and geography. Students from outside the University of Minnesota may register through Continuing Education and Extension. Instructor: Charles Sugnet sugnet@umn.edu (Morse Alumni Award, Arthur Motley Exemplary Tch Aw) 3 credits. Course meets Wednesdays from 5PM to 7:30 PM. Students must reserve the time to view films at Walker Art Center on Friday and Saturday evenings between Nov 5 and Nov 20, and on Sunday afternoons November 7 and 14. Admission to the films at Walker Art Center will be free for registered students. Students may arrange to do the readings and submit written work in French if that fits their educational needs.

AFRO 4001 Seminar: History of Women in South Africa
3 credit(s); Credit will not be granted if credit has been received for: HIST 3438;
Instructor: Atkins, Keletho E
Description: By relying primarily on oral testimonies and autobiographies, African women are allowed to speak for themselves and talk about what they regard as important in their lives. Afro 4001 will focus mainly on the life stories of six southern African women: Nomgupo Dlamini, a teenager who served in the royal household of the Zulu king and later converted to Christianity; Nongeni Masithathu Zenani, a Xhosa storyteller; Bento Sifiso, a young woman trapped into a life of prostitution through naiveity and poverty; Phiyllis Ntantala, who lived her life “in a world of relative privilege”; Mpho Nthunya, a domestic worker; and Ellen Kuzwayo, social worker and anti-apartheid activist. This course will also examine historical accounts of Eva, or Krotoa, the most written about African anti-apartheid activist. This course will examine historical accounts of Eva, or Krotoa, the most written about African anti-apartheid activist. 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and so forth.

**Style:** 95% Discussion, videos

**Grading:** 75% reports/papers, 10% in-class presentation, 15% class participation.

**AFRO 4105 Ways of Knowing in Africa and the African Diaspora**

**A-F only, 3 credit(s);**

**Instructor:** Onishi, Yuichiro

**Description:** This course is an interdisciplinary examination of the knowledge systems of Africa and the African diaspora. It is a senior level seminar built on the assumption that we will create rich and substantial discussion on knowing. The lenses of culture will figure prominently in our analysis. We will engage in an interrogation of what scholars call African knowledge systems. This will serve as the context for interrogating African American knowing, as well as other cultures of the African diaspora. The idea is to open the door to the complicated epistemological and ontological possibilities of African and the African diaspora. Then we contemplate the shared and distinctive knowledge systems between Africa and the African diaspora. Indeed the knowledge systems of the continent are vast and the diaspora spans the globe; the Americas, Europe, Asia. Our most pointed focus, however, is the ways of knowing and world views of African Americans, a nodal point in the African diaspora. We will also selectively examine cultures in West Africa, the Americas, and the Caribbean. Nonetheless, our deepest focus will be on the African American case in the U.S. and the ways of knowing forged in the crucible of enslavement into the current period. We will certainly pay attention to the impact of European knowledge systems on the African world, but a key concern is how peoples on the African continent and across the African diaspora have produced and defined knowledge for themselves. Indeed this opens up a space for critically looking at the production of Western knowledge and the problematic of the process. We raise and explore the question: whose interests are served by the scientific/Western world view? What has been its impact on the modern and so-called post-colonial worlds? What does it mean to know in Africa and the African diaspora in the midst of tremendous diversity and complexity? Our perspective is comparative and the emphasis is on epistemological properties, worldviews, and modes of transmission associated with the peoples of the African world. Attention will be given to both theories and methodologies. Students will examine continuity and change in the way African peoples have thought about the world and left epistemological imprints upon the world. Most importantly, the course will focus on fostering the ability to critically think and analyze knowledge production from multiple perspectives.

**AFRO 4593 The African American Novel**

**3 credit(s); Credit will not be granted if credit has been received for: ENGL 4593;**

**Instructor:** Wright, John S

**Description:** AFRO / ENGL 4593: The African American Novel Since romanticism and literary abolitionism converged in the 1850s, African American storytellers have discovered strategic uses for the modern novel -- making it both an ethical instrument and a vessel of ancestral traditions. Inclined initially more to social realism than to fantasy, romance, or surrealism, black American novelists have created a "committed" literature rooted in the view that the images and ideas of the novel are potential weapons in the struggle for social justice and social transformation. Yet an ever-ready countercurrent of comedies, satires, historical fables, and speculative fictions conjured up by African American novelists express their indebtedness also to philosophical and folk traditions that view literature as a ritualistic and healing exploration of human possibility and the transmundane -- of alternate worlds and worldviews. This course explores these African American novelistic traditions -- plot patterns, character types, settings, symbols, themes, movements, and mythologies. From the little known novelistic worlds of late nineteenth century preachers and journalists to Harlem Renaissance political thrillers and urban picaresques to internationally renowned neo-slave narratives, Black Arts magic realism, and philosophical metafiction from the late twentieth century, we will steer a course through the creative and critical torrents of the modern black imagination. Because these writers have been profoundly concerned with social and historical 'truth', we will find that the materials and techniques of many African American novels, while dramatizing the conflicts and consciousness of the individual, attempt to 'reconstruct' emblematically the experiences and historical consciousness of the group. To complement lectures, during regular class meetings we will rely periodically on filmed interviews or documentaries, as well as on a variety of informal small groups to help focus your attention on the texts and concepts at hand, to strengthen your abilities to articulate and share what you have learned, and to provide another gauge of how successfully you are mastering various elements of the course. The course is designed for advanced undergraduates and graduate students. Written assignments and grading options as follows: Critical Research Paper: Each student is required to write an 10-12 page typed research paper (15-20 pages for graduate students) examining the critical reception (original reviews, etc.), interpretive controversies, and current standing of one of the course novels: Grades: Option A ? 40% journal, 40% term paper, 10% one-page rationales, 10% class participation Option B ? 30% short paper, 50% term paper, 10% rationales, 10% class participation

**AFRO 499W Thesis Research and Writing**

**A-F only, 3 credit(s); prereq dept consent; Meets CLE req of Writing Intensive;**

**Instructor:** Pate, Alexs D.

**Description:** Student may contact the instructor or department for information.

**AFRO 5625 Black Women Writers in the Diaspora**

**3 credit(s); Meets CLE req of Writing Intensive;**

**Instructor:** Githire, Njeri R

**Description:** Student may contact the instructor or department for information.

**AFRO 8202 Seminar: Intellectual History of Race**

**3 credit(s);**

**Instructor:** Brewer, Rose Marie

**Description:** ?Race? has little reality in the biological sense, yet its power to influence our lives and our self-understanding is enormous. This course explores the shifting and contested meanings of race, from the European 'Age of Conquest' onward. The course also contains a significant sociological analysis of the 'racial' notion. Starting from the proposition that race is not a stable or fixed category of social thought and being, our primary task will be to ascertain how Western ideas and sociological practice about race have changed, and why these changes have occurred. We will explore the large social processes and discourses developing and shaping the concept of race, particularly how various groups, e.g., native peoples of the Americas, Africans, and Europeans became racialized via enslavement, trade, colonialism and capitalism. We will explore, as well, the various justifications (religious, legal, philosophical, 'scientific') for notions of racial inferiority and racial superiority. While we will spend some time analyzing how what it means to be 'white' has been historically contingent on being non-Black or Indian, we will also explore the subjectivities of racialized and oppressed peoples, especially their critiques of racism and domination.

**Style:** 20% Lecture, 10% Film/Video, 40% Discussion, 10% Small Group Activities, 20% Student Presentation.

**Grading:** 30% reports/papers, 10% attendance, 30% reflection paper, 20% in-class presentation, 10% class participation. final research paper
AFEE 1001 Introduction to Agricultural Education and Extension
1 credit(s);
Instructor: Leising, James G
Description: AFEE 1001 is an introduction to the Agricultural Education major and orientation to career opportunities in the two specializations of the major: Leadership and communications and agricultural education teaching. In the process of learning about the field of agricultural education, some of the major topics include: history, current issues and programs, career opportunities, informational interviews and networking with professionals in the field and understanding requirements of the major.

AFEE 2051 Current Technical Competencies
3 credit(s);
Instructor: Swiggum, James Frederick
Description: Student may contact the instructor or department for information.

AFEE 2221 People Skills for Leadership
A-F only, 3 credit(s);
Instructor: Peterson, Roland L
Description: Student may contact the instructor or department for information.

AFEE 3096 Experiential Learning: Production and Business
1-8 credit(s), max credits 12, 12 completions allowed; prereq AgEd major, instr consent;
Instructor: Greiman, Brad
Description: Student may contact the instructor or department for information.

AFEE 3096 Experiential Learning: Production and Business
1-8 credit(s), max credits 12, 12 completions allowed; prereq AgEd major, instr consent;
Instructor: Leising, James G
Description: Student may contact the instructor or department for information.

AFEE 3112 Technical Drawing and Production Technologies
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: BIE 3112;
Instructor: Swiggum, James Frederick
Description: Student may contact the instructor or department for information.

AFEE 3361 World Development Problems
3 credit(s); Meets CLE req of Global Perspectives;
Instructor: Amenumey, Felix K.
Description: Student may contact the instructor or department for information.

AFEE 5111W Agricultural Education: Methods of Teaching
4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Westrom, Lyle Emil
Description: The goal of this course is to provide an overview of instructional strategies utilized by agricultural education instructors in secondary schools, and by adult educators in agricultural businesses, organizations, and government agencies. This course will examine the teaching and learning process, and is intended to assist agricultural education undergraduate students in developing effective teaching skills. Students will learn techniques necessary for designing instruction, motivating learners, leading the educational process, and managing the learning environment. The problem-solving approach to teaching is stressed for a major portion of the course and students have the opportunity to practice the delivery of instruction in a performance-based format.
Style: 40% Lecture, 30% Discussion, 30% Laboratory.

AFEE 5111W Agricultural Education: Methods of Teaching
4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Greiman, Brad
Description: The goal of this course is to provide an overview of instructional strategies utilized by agricultural education instructors in secondary schools, and by adult educators in agricultural businesses, organizations, and government agencies. This course will examine the teaching and learning process, and is intended to assist agricultural education undergraduate students in developing effective teaching skills. Students will learn techniques necessary for designing instruction, motivating learners, leading the educational process, and managing the learning environment. The problem-solving approach to teaching is stressed for a major portion of the course and students have the opportunity to practice the delivery of instruction in a performance-based format.
Style: 40% Lecture, 30% Discussion, 30% Laboratory.

AFEE 5280 Current Issues for the Beginning Agricultural Education Teacher
1-3 credit(s), max credits 3, 1 completion allowed;
Instructor: Greiman, Brad
Description: Student may contact the instructor or department for information.

AFEE 5361 World Development Problems
3 credit(s); prereq Grad students only;
Instructor: Amenumey, Felix K.
Description: Student may contact the instructor or department for information.

AFEE 5697 Teaching Internship: School and Classroom Setting
2 credit(s); prereq WHRE 5696 for initial licensure program;
Instructor: Leising, James G
Description: Student may contact the instructor or department for information.

AFEE 5993 Directed Study in Agricultural Education and Extension
1-9 credit(s), max credits 9, 1 completion allowed;
Instructor: Leising, James G
Description: Student may contact the instructor or department for information.

AFEE 5993 Directed Study in Agricultural Education and Extension
1-9 credit(s), max credits 9, 1 completion allowed;
Instructor: Leising, James G
Description: Student may contact the instructor or department for information.

AFEE 5995 Integrating Paper—Master of Education: Agricultural and Extension Education
A-F only, 1-4 credit(s), max credits 4, 1 completion allowed;
Instructor: Greiman, Brad
Description: Student may contact the instructor or department for information.

AFEE 5995 Integrating Paper—Master of Education: Agricultural and Extension Education
A-F only, 1-4 credit(s), max credits 4, 1 completion allowed;
Instructor: Leising, James G
Description: Student may contact the instructor or department for information.

Agronomy and Plant Genetics
411 Borlaug Hall

AGRO 1007 Horse in Your Backyard
A-F only, 2 credit(s); Credit will not be granted if credit has been received for: ANSC 1007;
Instructor: Hathaway, Marcia R
Description: Role of horses in society. How to keep a horse well fed and healthy. Nutrition, feedstuffs, pasture, health. How to seek/interpret information on vaccination, worming, nutrition, grazing management, hay selection, manure handling, and use of dietary feed additives/enhancers.
AGRO 1093 Directed Studies
1-4 credit(s), max credits 12, 12 completions allowed; prereq 4 or in agronomy, instr consent; 
Instructor: Brokke, Mary Patricia
Description: Student may contact the instructor or department for information.

AGRO 1093 Directed Studies
1-4 credit(s), max credits 12, 12 completions allowed; prereq 4 or in agronomy, instr consent; 
Instructor: Cardwell, Vernon Bruce
Description: Student may contact the instructor or department for information.

AGRO 1101 Biology of Plant Food Systems
4 credit(s); Meets CLE req of Biological Sciences; 
Instructor: Morrell, Peter Laurent
Description: Student may contact the instructor or department for information.

AGRO 1103 Crops, Environment, and Society
4 credit(s); Credit will not be granted if credit has been received for: AGUM 2222; Meets CLE req of Environment; 
Instructor: Sheaffer, Craig Charles
Description: Life on earth is dependent on plants. Learn about food, fiber, and medicinal plants that are important to our society, their impact on environmental quality, and how they are improved and cultured. Discuss currently important topics such as genetic engineering, food safety, water quality, organic agriculture, and species preservation. In a laboratory, learn about how plants grow, and about food products derived from plants. This course is intended for undergraduate majors and non-majors interested in a general understanding of food and fiber production from crop plants. In the class, we use several approaches to learning, such as case studies, and minimize lecturing. We promote discussion by viewing videos and reviewing recent newspaper and magazine articles. 
Style: 30% Lecture, 40% Discussion, 20% Laboratory. Problem solving 
Grading: 40% mid exam, 20% final exam, 20% laboratory evaluation, 20% problem solving. 
Exam Format: Short answer

AGRO 1660 First-Year Colloquium/Experience in Agroecosystems Analysis
A-F only, 2 credit(s); prereq 1st yr in major hosted by Department of Agronomy and Plant Genetics; 
Instructor: Anderson, James Allan
Description: Student may contact the instructor or department for information.

AGRO 1942 Topics: Freshman Seminar: By the Harvest You Shall Live
A-F only, 3 credit(s); prereq Fr; Meets CLE req of Technology and Society; 
Instructor: Cardwell, Vernon Bruce
Description: Student may contact the instructor or department for information.

AGRO 2501 Plant Identification for Urban and Rural Landscapes
2 credit(s); prereq Biol 1009 or equiv; Credit will not be granted if credit has been received for: AGUM 2240; 
Instructor: Durgan, Beverly R
Description: Student may contact the instructor or department for information.

AGRO 2501 Plant Identification for Urban and Rural Landscapes
2 credit(s); prereq Biol 1009 or equiv; Credit will not be granted if credit has been received for: AGUM 2240; 
Instructor: Durgan, Beverly R
Description: This course is intended to familiarize students with plant and weed species that are important in turf, horticulture, forestry, and crop production systems. This course will emphasize the identification of native grasses and forbs, field crops, and weed species found in Minnesota and the upper midwest area of the United States through the use of keys and plant specimens. Students will also study plant life cycles, habitats, propagation, physiology, morphology, and economic importance and relationships to humans. 
Style: 33% Lecture, 67% Laboratory. 
Grading: 30% mid exam, 30% final exam, 20% special projects, 20% quizzes. 
Exam Format: Practical plant I.D., short answer, multiple choice

AGRO 4093 Directed Studies for Advanced Students
1-4 credit(s), max credits 12, 12 completions allowed; prereq 15 cr in agronomy, instr consent; 
Instructor: Cardwell, Vernon Bruce
Description: Student may contact the instructor or department for information.

AGRO 4096 Professional Experience Program: Internship
S-N only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq CFANS undergrad, instr consent , completed internship contract from CFANS; 
Instructor: Cardwell, Vernon Bruce
Description: Student may contact the instructor or department for information.

AGRO 4097 Undergraduate Research Thesis
A-F only, 1-6 credit(s), max credits 12; prereq Jr or sr; 
Instructor: Smith, Kevin Paul
Description: Student may contact the instructor or department for information.

AGRO 4603 Field Crop Scouting and Problem Diagnosis
3 credit(s); prereq 3005, Soil 3416, [2501, Ent 3001, PIPa 2002] or Agr 3001], [Jr or sr], 16-20 cr in major; 
Instructor: Cardwell, Vernon Bruce
Description: Student may contact the instructor or department for information.

AGRO 4605 Management Strategies for Crop Production
3 credit(s); prereq [Jr or sr or grad student], [program committee approval or instr consent ]; 
Instructor: Cardwell, Vernon Bruce
Description: Student may contact the instructor or department for information.

AGRO 4660 Senior Capstone
A-F only, 2 credit(s); prereq 4096; 
Instructor: Muehlbauer, Gary John
Description: This course examines the complexities of agricultural issues through a series of discussions. The course also engages students in exercises and discussions that intergrate previous educational situations. This course is linked to undergraduate internships and other experiential learning opportunities such as thesis or direct studies and service learning. Written and oral assignments are based on internships or other learning experiences. 
Style: 10% Lecture, 90% Discussion. 
Grading: 50% reports/papers, 30% in-class presentation, 20% other evaluation. class discussion

AGRO 4888 Issues in Sustainable Agriculture
2 credit(s); prereq 1103, Soil 1125 or 2125 or equiv; 
Instructor: Sheaffer, Craig Charles
Description: Study the social, economic, political and environmental aspects of a sustainable agriculture through discussions with experts in the field. Specific topics can include: the history of agriculture and the family farm, government farm policy, the importance of biodiversity for healthy landscapes, rural communities, quality of life, community supported agriculture, organic agriculture, landscape health and non-profit organizations. Teaching approaches will include student, faculty and producer-led discussions. The course will include on-farm visits. Target audience: non-majors and majors interested in sustainable agriculture.

AGRO 5311 Research Methods in Crop Improvement and
AGRO 5980 Publishing in Plant Science Journals
S-N only, 2 credit(s); prereq instr consent; Instructor: Bernardo, Rex N
Description: Student may contact the instructor or department for information.

AGRO 5999 Special Topics: Workshop in Agronomy
1-6 credit(s), max credits 6, 3 completions allowed; prereq Jr or sr or grad student; Instructor: Brakke, Mary Patricia
Description: This course provides students with an introduction to food, agriculture and agroecosystems in 10 African countries (Egypt, Sudan, Ethiopia, Kenya, Tanzania, Malawi, Zambia, Botswana, Namibia, and South Africa). In 2010 bicyclers with Tour d’Afrique (www.tourdafrique.com) will travel through these countries starting January in Cairo and ending 15 May in Cape Town. In 2009 Dr. Paul Porter traveled 3,700 miles with this group until mid-March. In 2010 he intends to resume the ride in mid-March and complete the trek to Cape Town. As he travels he will be observing the food, agriculture and agroecosystems and relate these observations back to the class. Thus Dr. Porter will be in the classroom only for the first half of the semester, and traveling in Africa the second half. The class is co-taught with Dr. Mary Brakke. Students will be exposed to Dr. Porter's 2009 experiences as well as a series of faculty guest speakers with a wide array of professional activities in Africa. Upon his return to the trek in March 2010, Dr. Porter will provide daily written and audio-blogs of his experiences, focusing on food, agriculture and agroecosystems (and to a lesser extent the ride itself). Periodically he will have direct phone conversations back to the students in the classroom. His daily blogs will include 1) the ending location, distance traveled and elevation, 2) an assessment of the water situation and climate, 3) the food he eats and what the local population eats, 4) an assessment of the agroecosystems, 5) an assessment of the culture and infrastructure, and 6) a conversation, sight, and/or reflection for the day. There will be no textbook for the class. Students will be expected to read postings provided on WebVista as well as selected websites (such as http://paulporter.wordpress.com). The target audience includes students at any grade level from any college who have an interest in 'coming along' for the ride and learning more about food, agriculture and agroecosystems in a sliver of Africa from Cairo to Cape Town. Also in this class students will gain firsthand experience eating food from a local restaurant specializing in African cuisine.
Style: 20% Lecture, 10% Film/Video, 10% Discussion, 10% Small Group Activities, 40% Guest Speakers, 10% Web Based.
Grading: 20% mid exam, 10% quizzes, 10% written homework, 20% additional semester exams, 10% journal, 20% reflection paper, 10% class participation.
Exam Format: Short answer, multiple choice

AGRO 8201 Advanced Plant Breeding
A-F only, 3 credit(s); prereq STAT 5301 or equiv; Credit will not be granted if credit has been received for: HORT 8201; Instructor: Anderson, James Allan
Description: Student may contact the instructor or department for information.

AGRO 8270 Graduate Seminar
A-F only, 1 credit(s); prereq Grad major in [applied plnt sci or agro or ent or hort or plnt brdg or plnt path or soil] or instr consent; Credit will not be granted if credit has been received for: HORT 8270; Instructor: Wyse, Donald L
Description: Student may contact the instructor or department for information.

Akkadian
245 Nicholson Hall

AKKA 5011 Elementary Akkadian I
3 credit(s); prereq Adv undergrads with instr consent or grads; Instructor: von Dassow, Eva
Description: Akkadian, comprising the Old Akkadian, Assyrian, and Babylonian dialects, was the predominant Semitic language of ancient Mesopotamia. It was written in the cuneiform script, and is attested in writing from the third millennium BCE, until the early first millennium CE. Akkadian was adopted as a written language in many regions beyond Mesopotamia, from Iran to Anatolia and even Egypt, in certain periods. This course is the first half of a two-semester introduction to the Akkadian language and the cuneiform script. The Old Babylonian dialect will serve as the basis for instruction in the language, using J. Huehnergard’s “Grammar of Akkadian”. Students will also learn the cuneiform script, using Rene Labat's "Manuel d'epigraphie akkadienne." The class will read selections from texts of various genres, including the Laws of Hammurabi, the Descent of Ishtar, letters and contracts, and Assyrian royal inscriptions.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
Examination of actual artifacts inscribed in cuneiform will be part of the course.

Style: 50% Lecture, 50% Discussion.
Grading: 25% final exam, 30% reports/papers, 25% quizzes, 20% class participation.
Exam Format: Translation, vocabulary and grammar exercises

American Indian Studies
19 Scott Hall

AMIN 1001 American Indian Peoples in the United States
3 credit(s); Meets CLE req of Diversity and Soc Justice US;
Instructor: STAFF
Description: This course is intended to give students a general overview of the contemporary and historic experiences of American Indian peoples in the United States and Canada. It challenges the dominant culture’s stereotypes and its unthinking assumptions about American Indian people in the past and present. It shows how the peoples of America’s First Nations engaged the presence and representations of foreigners in their midst through acts of resistance, rebellion, accommodation, and innovation. In the process, it illustrates the great diversity of tribal cultures and histories in North America, and it gives evidence of this in the areas of identity, work, philosophy, politics, society, language, religion, literature, and the arts.

AMIN 1003 American Indians in Minnesota
A-F only, 3 credit(s); Meets CLE req of Diversity and Soc Justice US; meets CLE req of Historical Perspectives;
Instructor: McKay, Neil Troy
Description: The course will focus in particular on the history, culture, and lived experience of American Indian people in the state of Minnesota. This course will explore how Anishinaabe (Ojibwe) and Dakota people have represented their lives and histories through film, music, oral traditions and written texts. It also includes some work by non-Indian scholars which focus on the distinctive cultural, philosophical, and linguistic perspectives of Anishinaabe and Dakota peoples. The course invites local Dakota and Ojibwe artists, elders, and scholars to speak on their own experiences. It is particularly interested in revalidating the students’ tribal pedagogical and epistemological perspectives or “ways of knowing” as practiced by Indian people in Minnesota today and in the past. This course will introduce students to the humanities as understood within the intellectual perspectives and methodologies of the Dakota and Ojibwe, in particular, and American Indian Studies, more generally. Since these perspectives fall outside the western humanities tradition, this course offers a culturally unique and tribally based perspective on subject matter in the humanities, namely literature, art, music, philosophy and language.
Style: 40% Lecture, 30% Discussion. video, guest speakers
Grading: 20% mid exam, 20% final exam, 20% reports/papers, 10% class participation, 30% other evaluation. attendance, readings
Exam Format: question and answer, open ended, true false

AMIN 3107 Structure of Anishinaabemowin, the Ojibwe Language
A-F only, 3 credit(s); prereq 3103; Credit will not be granted if credit has been received for: AMIN 5107;
Instructor: Nichols, John David
Description: Analysis of grammatical structures of Anishinaabemowin.

AMIN 3201W American Indian Literature
3 credit(s); Meets CLE req of Diversity and Soc Justice US; meets CLE req of Literature; meets CLE req of Writing Intensive;
Instructor: Meland, Carter
Description: How do you creatively respond to the transformations and deformations introduced into Native America by the colonizing cultures of Europe and Euroamerica? In this course we examine how a select group of American Indian writers creatively respond to the experience of colonization in the narratives they imagine. This question is not aimed exclusively at American Indian writers though, nor is it even more generally aimed only at Indian people. Rather this question about colonization is aimed at everyone living here now: How do you (you sitting there reading this statement) creatively respond to the transformations and deformations introduced into Native America by the colonizing culture of Euroamerica? This course invites you to think about this question and this writing, even if you never have before. In class discussions we will examine how various writers approach this question and we will familiarize ourselves with the ideas, themes, and tools Native writers use through close readings of their works. In addition to examining the works we will also examine ways the various works ask us to consider and reconsider our own experiences of living in North America. Your responses to the works and our guiding question will be explored, examined, and developed in class discussions, a variety of short writing assignments, and in a final research essay. You will read four or five books for the course as well as a half-dozen or so short readings. As the course is Writing-Intensive you will also do about 40 pages of writing.
Style: 10% Lecture, 90% Discussion.
Grading: 80% reports/papers, 20% quizzes.

AMIN 3201W American Indian Literature
3 credit(s); Meets CLE req of Diversity and Soc Justice US; meets CLE req of Literature; meets CLE req of Writing Intensive;
Instructor: Power, Susan Mary
Description: Student may contact the instructor or department for information.

AMIN 3301 American Indian Philosophies
4 credit(s); Meets CLE req of Arts/Humanities; meets CLE req of Diversity and Soc Justice US;
Instructor: STAFF
Description: The purpose of this course is to introduce students to the philosophical thought and spiritual beliefs of native peoples of North America. Students will examine a broad spectrum of issues which influence the worldview of native people on this continent, including European contact and thought. Students may find some of the issues to be controversial and personally challenging, however, a thorough discussion of the impact of European influences is important to understanding native people’s resistance and survival. Finally, students will also explore the ways in which native philosophy and spiritual practices shape native life experience in a society viewed by many native people as being at odds with their beliefs.
Style: 80% Lecture, 20% Discussion. Group work
Grading: 33% mid exam, 33% final exam, 17% reports/papers, 17% class participation.
Exam Format: The exams will be a take home essay.

AMIN 3601 American Indian Oral Traditions
A-F only, 3 credit(s);
Instructor: Nichols, John David
Description: This course looks at the ways the indigenous societies of North America have understood and explained to themselves who they are; how they have come to live a certain way in a certain place speaking a certain tongue; and how they should live there among themselves and in relation to other beings. We will read and analyze written texts of performances -- recognizing them as altered by the processes of transcription, translation, and editing -- of orally-transmitted historical and literary documents of some of these societies. In English they have been labeled as folk tales, histories, legends, myths, rituals, songs, and speeches. We try to understand these documents in the contexts of the societies that made them even as we let them speak to us across time and cultural boundaries.
Style: 50% Lecture, 50% Discussion.

AMIN 3701 Ojibwe Culture and History
3 credit(s); Meets CLE req of Diversity and Soc Justice US; meets CLE req of Historical Perspectives;
Instructor: Jones, David
Description: An introductory overview of Ojibwe culture, history,
beliefs, and traditions, including philosophy and world view. The course is presented in four parts, with a test and a paper due at the completion of each part.

**Style:** 50% Lecture, 50% Discussion.

**Grading:** 20% final exam, 40% reports/papers, 40% quizzes.

**Exam Format:** Multiple choice; true/false; and matching

**AMIN 4501 Law, Sovereignty, and Treaty Rights**

*3 credit(s); prereq 1001;*  
**Instructor:** Wilkins, David E  
**Description:** This course introduces the student to U.S. domestic policy and federal law as it pertains to American Indian peoples. First, we engage in a critical analysis of the interaction between the three principal actors--Indigenous nations, the Federal Government, and States. Second, we discuss the role of Indian activism, the media, and interest organizations in Indian law and policy formulation. Third, we briefly examine the historical development of major federal Indian policy eras. Finally, we engage in a focused analysis of several specific federal policy initiatives that are particularly contentious at the moment--Indian gaming, religious freedom, federal recognition, and the international arena.

**Style:** 20% Lecture, 80% Discussion.

**Grading:** 25% mid exam, 25% final exam, 25% reports/papers, 25% other evaluation. weekly questions

**Exam Format:** essay

**AMIN 4990 Topics in American Indian Studies**

*1-4 credit(s), max credits 8;*  
**Instructor:** Wilkins, David E  
**Description:** "Vine Deloria, a Standing Rock Sioux citizen, is widely considered to be the leading indigenous intellectual. He spent his life in an unrelenting effort to provide native nations with the intellectual, cultural, and substantive arguments necessary to support their sovereignty. He also was intent on improving intergovernmental relations as well, and sought to educate the broader public about the distinctive rights of native peoples and indigenous knowledge. Deloria was the most prolific native writer in history and published more than twenty-five books and hundreds of articles in a wide range of disciplines. In this course we will discuss and critically analyze a number of his books and hundreds of articles in a wide range of disciplines. In this course we will discuss and critically analyze a number of his major and lesser known works in several of the interconnected fields he worked in: metaphysics/philosophy, activism, law and policy, religion/spirituality, scientific critiques, and education."

**AMIN 5107 The Structure of Anishinaabemowin, the Ojibwe Language**

*A-F only, 3 credit(s); prereq 3104; Credit will not be granted if credit has been received for: AMIN 3107;*  
**Instructor:** Nichols, John David  
**Description:** Student may contact the instructor or department for information.

**AMIN 5402 American Indians and the Cinema**

*A-F only, 3 credit(s); Meets CLE req of Arts/Humanities; meets CLE req of Diversity and Soc Justice US;*  
**Instructor:** Meland, Carter  
**Description:** In American Indians and the Cinema, we examine historical and contemporary representations of American Indian peoples in film, the power inequities reflected in those representations, and American Indian resistance to those representations. We will ask ourselves how have particular images of Indians in the movies served the interests of an American nationalist agenda rather than the interests of Native individuals and nations themselves. The course aims to make such questions of the power of representation clear to students and offers the tools to engage in a critique of conventional cultural representations of American Indian people, as well as, more critically, exposing them to an emerging body of work by American Indian filmmakers asserting their own authority in controlling their images and offering their stories to the viewing world at large. The course addresses ideas of diversity and social justice in the U.S. by exploring how films by American Indian filmmakers offer a differing idea of what American Indian experience has been and is--and ultimately examines the development of an American Indian ?aesthetic? by Native filmmakers that is grounded in the historical and ongoing cultural viability of Native peoples. Students taking the course focus on developing a critical vocabulary for understanding both what film is and how it has historically represented American Indian peoples as well as exploring how these representations have changed, or not, in response to changing historical/social contexts. Through examinations and papers students will engage in the task of articulating their critical insights concerning the films and the contexts they emerge from and reflect on.

**Style:** 10% Lecture, 40% Film/Video, 40% Discussion, 10% Student Presentation.

**American Sign Language**

240 VoTech Building

**ASL 1701 American Sign Language I**

*5 credit(s);*  
**Instructor:** STAFF  
**Description:** A study of the fundamentals of American Sign Language: Introduction to learning and understanding American Sign Language, cultural values and rules of behavior of the deaf community in the United States. Includes receptive and expressive readiness activities, sign vocabulary, grammatical structure, receptive and expressive finger spelling, and deaf culture.

**ASL 1702 American Sign Language II**

*5 credit(s); prereq 1701 with grade of at least [S or C-] or dept consent;*  
**Instructor:** STAFF  
**Description:** Continuation of the study of the fundamentals of American Sign Language: Increased communication skill in American Sign Language, cultural values and behavioral rules of the deaf community in the U.S., receptive and expressive, sign vocabulary, grammatical structure, receptive and expressive finger spelling and aspects of deaf culture. (SP-ASL 1701 or instructor approval)

**ASL 3703 American Sign Language III**

*5 credit(s); prereq 1702 with grade of at least [S or C-] or dept consent;*  
**Instructor:** STAFF  
**Description:** Expanded instruction of American Sign Language receptive and expressive activities, sign vocabulary, grammatical structure, receptive and expressive finger spelling, narrative skills, cultural behaviors, and aspects of deaf culture. Abstract and conversational approach. (SP-ASL 1702 or instructor approval)

**ASL 3704 American Sign Language IV**

*5 credit(s); prereq 3703 with grade of at least [S or C-] or dept consent;*  
**Instructor:** STAFF  
**Description:** Increases the emphasis on more abstract and challenging conversational and narrative range. Includes receptive and expressive readiness activities, sign vocabulary, grammatical structure, receptive and expressive finger spelling, various aspects of deaf culture and cultural behavior rules. (SP-ASL 1703 or instructor approval)

**ASL 3705 Cultural Perspectives of Deafness**

*3 credit(s);*  
**Instructor:** STAFF  
**Description:** Introduction to the deaf community as a linguistic and cultural minority group. The role of deaf people in the larger society, political activism, laws, access to information, educational philosophies and methods, and communication systems.
AMST 1905 Freshman Seminar
3 credit(s); prereq Fr;
Instructor: Fajardo,Kale Bantigue
Description: Student may contact the instructor or department for information.

AMST 2011 The United States since September 11
3 credit(s); Meets CLE req of Civic Life and Ethics; meets CLE req of Historical Perspectives;
Instructor: Ferguson,Roderick A
Description: We think that those two towers were the only things that collapsed on that morning in September. But a lot more fell than has been reckoned with. We think that those attacks left only empty spaces in the middle of New York City. But a lot was erected in the name of what was lost. This course analyzes the changes that took place within the United States and how those changes have a history in prior and forgotten wars in Asia, the Middle East, and Latin America. This course investigates how that day was remembered in the official terrains of government and in the unofficial venues of literary and visual art. This class asks how the lives of citizens and immigrants changed in the aftermath and tries to take stock of all that fell and all that was erected one day in 2001.
Style: 50% Lecture, 50% Discussion.
Grading: 35% mid exam, 35% final exam, 10% class participation.
Exam Format: essay, short answer

AMST 3113W America's Diverse Cultures
3 credit(s); Meets CLE req of Diversity and Soc Justice US; meets CLE req of Writing Intensive;
Instructor: Ault,Elizabeth J.
Description: Student may contact the instructor or department for information.

AMST 3114 America in International Perspective
3 credit(s); Meets CLE req of Diversity and Soc Justice US;
Instructor: Murphy,Ryan P
Description: Student may contact the instructor or department for information.

AMST 3252W American Popular Culture and Politics: 1900 to 1940
4 credit(s); Meets CLE req of Civic Life and Ethics; meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;
Instructor: Proll,Riv-Ellen
Description: Student may contact the instructor or department for information.

AMST 3253W American Popular Culture and Politics: 1940 to the Present
4 credit(s); Meets CLE req of Civic Life and Ethics; meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;
Instructor: STAFF
Description: In this course, we will examine how the United States changed since World War II as a result of domestic and international struggles, exploring the role popular culture played in this transformation. During these years the nation became an international power, altering the ways in which Americans understood their place in the world. A new consumer culture and domestic ideal became linked to American identity and Cold War politics. Within the U.S., challenges to the mainstream took the form of a new counter culture, the assertion of black citizenship, and the rise of feminism, each demanding participation in public life and a redefinition of the hierarchies of the past. In this course, we will look at the ways in which these conflicts at home and abroad have changed the ways Americans think about themselves as citizens and the place of our nation in the world.
Style: To be announced instructor will provide specific information

AMST 3402 American Indians and the Cinema
3 credit(s);
Instructor: Meland,Carter
Description: Student may contact the instructor or department for information.

AMST 3993 Directed Studies
1-9 credit(s), max credits 9, 1 completion allowed; prereq instr consent;
Instructor: STAFF
Description: Arrangements must be made with the professor who oversees the project.

AMST 4101 Gender, Sexuality, and Politics in America
3 credit(s); Meets CLE req of Diversity and Soc Justice US; meets CLE req of Historical Perspectives;
Instructor: STAFF
Description: Ways public and private life intersect through the issues of gender, sexuality, family, politics, and public life; ways in which racial, ethnic, and class divisions have been manifest in the political ideologies affecting private life. Class time, workload, grading and exam format are determined by instructors. The focus of each instructor varies with the instructor's expertise.
Style: Will be determined by course instructor
Grading: Will be determined by instructor

AMST 4961 Proseminar I
3 credit(s); prereq AmSt Jr or AmSt sr or instr consent ;
Instructor: Castellanos,Bianet
Description: Student may contact the instructor or department for information.

AMST 8201 Historical Foundations of American Studies
3 credit(s); prereq grad AmSt major;
Instructor: Ferguson,Roderick A
Description: Student may contact the instructor or department for information.

AMST 8249 Popular Culture and Politics in the 20th Century: Readings
3 credit(s);
Instructor: May,Lary L
Description: Student may contact the instructor or department for information.

AMST 8801 Dissertation Seminar
S-N only, 3 credit(s); prereq AmSt doctoral student beginning dissertation work;
Instructor: Proll,Riv-Ellen
Description: Student may contact the instructor or department for information.

AMST 8920 Topics in American Studies
3 credit(s), max credits 9, 3 completions allowed;
Instructor: Castellanos,Bianet
Description: This course critically engages with the concept of ?transnationalism? through an examination of its intellectual genealogy. We will trace the evolution of this term from its origins in finance to its use in queer theory and studies of migration, gender, class, race, and nationalism. The latter part of the course will be dedicated to reading texts that employ a transnational framework and will provide a forum for examining more critically the ways this concept is used and deployed by scholars to discuss the politics of place, displacement, gender, sexuality, race, and citizenship. We will also interrogate the methodologies these scholars used to map out transnational practices.

AMST 8970 Independent Study in American Studies
1-9 credit(s), max credits 9, 9 completions allowed; prereq instr consent, dept consent;
Instructor: Ferguson,Roderick A
Description: Student may contact the instructor or department for information.

Grading: Grading will be determined by to be announced instructor

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
**ANSC 1007 Horse in Your Backyard**
A-F only, 2 credit(s); Credit will not be granted if credit has been received for: AGRO 1007;  
**Instructor:** Hathaway, Marcia R  
**Description:** Role of horses in society. How to keep a horse well fed and healthy. Nutrition, feedstuffs, pasture, health. How to seek/interpret information on vaccination, worming, nutrition, grazing management, hay selection, manure handling, and use of dietary feed additives/enhancers.

**ANSC 1011 Animals and Society**
3 credit(s); Meets CLE req of Civic Life and Ethics;  
**Instructor:** Seykora, Anthony James  
**Description:** This course addresses contemporary issues that are impacting animal agriculture. Major issues include the safety, nutritional value and health related issues of animal products in the human diet; animal behavior, welfare, and rights; organic vs. conventionally produced food; genetically enhanced foods; and the changing, industrialized structure of the livestock industry. The main focus is on livestock species, but care, management, and welfare of companion animals and wildlife are also a part of the course. Guest speakers from the livestock/food industries and animal welfare groups are an integral part of the course.  
**Style:** 70% Lecture, 30% Discussion.  
**Grading:** 40% mid exam, 20% final exam, 40% reports/papers.  
**Exam Format:** Short answer/true and false/multiple choice.

**ANSC 1511 Food Animal Products for Consumers**
3 credit(s);  
**Instructor:** Rozeboom, Kyle James  
**Description:** Introduction to the compositional variation, processing, selection, storage, cookery, palatability, nutritional value, and safety of red meat, poultry, fish, and dairy products.

**ANSC 1701 Historical Influence of the Horse on Society**
3 credit(s); Meets CLE req of Historical Perspectives;  
**Instructor:** Hathaway, Marcia R  
**Description:** Student may contact the instructor or department for information.

**ANSC 2011 Dairy Cattle Judging**
2 credit(s); prereq instr consent;  
**Instructor:** Hansen, Leslie Bennett  
**Description:** Evaluation of dairy cows and heifers on the basis of physical appearance. Training in oral justifications of placings of classes of animals. Field trips to many dairy farms in Minnesota, Iowa, and Wisconsin to evaluate dairy animals. Most students enrolling in this course have interest in participating in the Intercollegiate Dairy Cattle Judging Teams program. No previous dairy cattle judging experience is required, but is highly recommended.  
**Style:** 100% Laboratory. Placings of classes and oral justification of placings.  
**Grading:** Placings of classes and oral justification of placings.

**ANSC 2055 Horse Management**
2 credit(s);  
**Instructor:** Ward, Christie  
**Description:** Horse Health & Management: This course is designed to develop knowledge and practical skills related to general horse management and health maintenance through a combination of lectures, class discussions, student presentations, and hands-on skill development sessions. Management strategies will include lectures and labs on horse breeds and uses, anatomy and conformation, horse behavior, feeding management, and facility management. Time will also be devoted to an exploration of different career options and business opportunities in the horse industry. Strategies for prevention of disease will emphasize environmental hygiene, principles of good nutrition for horses, parasite control, and prevention of infectious disease through vaccination. Hands-on sessions are designed to develop practical skills such as body condition scoring, estimation of body weight, intramuscular
injections, and bandaging techniques. Please note that this course will not provide extensive instruction in equine nutrition or the management of breeding stallions, pregnant mares, and foals. Comprehensive coverage of these subjects is available in ANSC 3007 Equine Nutrition (Dr. Marcia Hathaway, instructor) and VPM 3700 Equine Reproduction and Breeding Management (Dr. Scott Madill, instructor). These courses are offered in Spring Semester. NOTE: The combination of ANSC 2055 Horse Health Management and ANSC 3007 Equine Nutrition (Dr. Marcia Hathaway, instructor) meets the management requirement for Equine Option students. Style: 60% Lecture, 10% Discussion, 20% Laboratory, 10% Small Group Activities. Grading: 40% mid exam, 20% final exam, 15% special projects, 15% quizzes, 10% class participation. Three group presentation projects (each worth 5% of the final grade) and three take-home assignments (each worth 5% of the final grade). Three exams, each worth 20% of the final grade. Exam Format: Multiple-choice, short answer, and true-false

ANSC 2055 Horse Management
2 credit(s);
Instructor: Martinson, Krishaonna Lynn
Description: Horse Health & Management: This course is designed to develop knowledge and practical skills related to general horse management and health maintenance through a combination of lectures, class discussions, student presentations, and hands-on skill development sessions. Management strategies will include lectures and labs on horse breeds and uses, anatomy and conformation, horse behavior, feeding management, and facility management. Time will also be devoted to an exploration of different career options and business opportunities in the horse industry. Strategies for prevention of disease will emphasize environmental hygiene, principles of good nutrition for horses, parasite control, and prevention of infectious disease through vaccination. Hands-on sessions are designed to develop practical skills such as body condition scoring, estimation of body weight, intramuscular injections, and bandaging techniques. Please note that this course will not provide extensive instruction in equine nutrition or the management of breeding stallions, pregnant mares, and foals. Comprehensive coverage of these subjects is available in ANSC 3007 Equine Nutrition (Dr. Marcia Hathaway, instructor) and VPM 3700 Equine Reproduction and Breeding Management (Dr. Scott Madill, instructor). These courses are offered in Spring Semester. NOTE: The combination of ANSC 2055 Horse Health Management and ANSC 3007 Equine Nutrition (Dr. Marcia Hathaway, instructor) meets the management requirement for Equine Option students. Style: 60% Lecture, 10% Discussion, 20% Laboratory, 10% Small Group Activities. Grading: 40% mid exam, 20% final exam, 15% special projects, 15% quizzes, 10% class participation. Three group presentation projects (each worth 5% of the final grade) and three take-home assignments (each worth 5% of the final grade). Three exams, each worth 20% of the final grade. Exam Format: Multiple-choice, short answer, and true-false

ANSC 2401 Animal Nutrition
3 credit(s);
Instructor: Stern, Marshall D
Description: Introduction to the principles of animal nutrition discussed on a comparative species basis including classification and function of the various nutrients (carbohydrates, protein, lipids, minerals and vitamins); use of nutrients for body maintenance, growth, egg production, gestation, and lactation; comparative study of the digestive systems of farm animal species; nutrient requirements and allowances for farm animals. The course is targeted for undergraduates seeking an understanding of how feedstuffs are combined to meet the nutrient needs of animals and appreciate the practical application of nutrition to farm animals species. Style: 100% Lecture. Grading: 100% other evaluation. 5 EXAMS, WITH EACH EXAM WORTH 20% OF THE GRADE.

ANSC 3142 Advanced Livestock Judging
2 credit(s); prereq 2013 or instr consent;
Instructor: Rozeboom, Kyle James
Description: Student may contact the instructor or department for information.

ANSC 3221 Animal Breeding
4 credit(s);
Instructor: Seykora, Anthony James
Description: This course is the application of qualitative and quantitative genetic principals to animal breeding. Topics include Mendelian genetics, computation of genetic values from an individual's own performance and relatives, selection indexes, inbreeding and relationships, crossbreeding and development of a breeding program. The laboratory portion of the course is held in the computer lab. Computer simulation programs enhance the learning experience of the students. Style: 60% Lecture, 15% Discussion, 25% Laboratory. Grading: 30% mid exam, 15% final exam, 15% special projects, 15% quizzes, 25% problem solving. Exam Format: true-false, multiple choice, problem solving

ANSC 3301 Human and Animal Physiology
3 credit(s); prereq [BIOL 1009, CHEM 1011] or [CHEM 1015, CHEM 1017] or [CHEM 1021, CHEM 1022];
Instructor: Wheaton, Jonathan E
Description: This is an immediate level course that covers the functions of the major organ systems: the nervous system, muscles, cardiovascular, respiration, renal, endocrinology, blood, digestion and reproduction. The course is intended for upper division undergraduate students. Style: 100% Lecture. Grading: 83% mid exam, 17% quizzes. Exam Format: One essay-type exam, others are multiple choice

ANSC 3302 Human and Animal Physiology Laboratory
1 credit(s); prereq 3301 or Concurrent registration is required (or allowed) in 3301;
Instructor: Wheaton, Jonathan E
Description: Student may contact the instructor or department for information.

ANSC 3305 Reproductive Biology in Health and Disease
4 credit(s); prereq BIOL 1009 or equiv;
Instructor: Mauro PhD, Laura J.
Description: This course is intended to provide students with an understanding of the basic principles of reproductive physiology emphasizing mammalian species. An introduction to the "chemical messengers" of reproduction--their synthesis, mechanism of action and regulation--will provide a foundation for a detailed study of topics, such as sexual differentiation, the functioning of the female and male reproductive systems, the physiology of pregnancy and birth, and reproductive senescence. These topics will be expanded to incorporate unique aspects of reproduction in domestic and wild animals and humans, along with relevant examples of the pathophysiology of reproductive diseases. The students will also be introduced to the current science and issues of applied reproductive biotechnologies. This course is targeted for undergraduates majors, pre-professionals and non-majors who want a better understanding of the basic and applied concepts of reproduction in animals and humans. Style: 75% Lecture, 10% Discussion, 15% Laboratory. Exam Format: Combination of short answer and multiple choice

ANSC 3307 Artificial Insemination Techniques
S-N only, 1 credit(s); prereq instr consent;
Instructor: Seykora, Anthony James
Description: Hands-on training and techniques of artificial insemination in cattle at an off-campus laboratory setting. Proper techniques of AI and semen handling, and criteria for selection of bulls.

ANSC 3521 Biotechnology Applications in Pharmaceutical Research and Development
3 credit(s);
Instructor: Lepley, PhD, Robert
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
Description: Biotechnology Applications in Pharmaceutical R&D is taught in a manner that integrates basic concepts in cell and molecular biology, pharmacology, the FDA regulatory process, and pharmaceutical business models. Lectures emphasize the application of biotechnology to preclinical drug discovery and drug development process within the pharmaceutical and biotech industries. A global, macroeconomic perspective is used to provide insight into how biotechnology influences healthcare and food provisioning systems in countries other than the United States. The course draws upon scientists and management personnel within the biotech and pharmaceutical industries for lecture presentations and to mentor students in developing a written project focused on drug discovery.

Style: 70% Lecture, 20% Discussion. 10% Project Problem Solving

Grading: 20% special projects, 20% class participation. 60% exams and quizzes

Exam Format: multiple choice, true/false, short answer, essay

ANSC 3609 Business Planning for Animal Enterprises
2 credit(s);
Instructor: Renaur, Jeffrey Kimball
Description: Student may contact the instructor or department for information.

ANSC 4096 Professional Experience Program: Internship
S-N only, 1-3 credit(s), max credits 6; prereq CFANS undergrad, instr consent, agreement form;
Instructor: Shurson, Gerald C
Description: Student may contact the instructor or department for information.

ANSC 4096 Professional Experience Program: Internship
S-N only, 1-3 credit(s), max credits 6; prereq CFANS undergrad, instr consent, agreement form;
Instructor: Mauro, Ph.D. Laura J.
Description: Student may contact the instructor or department for information.

ANSC 4096 Professional Experience Program: Internship
S-N only, 1-3 credit(s), max credits 6; prereq CFANS undergrad, instr consent, agreement form;
Instructor: Hathaway, Marcia R
Description: Student may contact the instructor or department for information.

ANSC 4096 Professional Experience Program: Internship
S-N only, 1-3 credit(s), max credits 6; prereq CFANS undergrad, instr consent, agreement form;
Instructor: Wheaton, Jonathan E
Description: Student may contact the instructor or department for information.
ANSC 4096 Professional Experience Program: Internship
S-N only, 1-3 credit(s), max credits 6; prereq CFANS undergrad, instr consent, agreement form;
Instructor: Rozeboom,Gretchen Diane
Description: Student may contact the instructor or department for information.

ANSC 4099 Special Workshop in Animal Science
1-4 credit(s), max credits 24, 6 completions allowed;
Instructor: Seykora,Anthony James
Description: Workshops on a variety of topics in animal science.

ANSC 4099 Special Workshop in Animal Science
1-4 credit(s), max credits 24, 6 completions allowed;
Instructor: DiCostanzo,Alfredo
Description: Student may contact the instructor or department for information.

ANSC 4401 Swine Nutrition
3 credit(s); prereq 2401, 3511 recommended;
Instructor: Shurson,Gerald C
Description: This course involves lectures, discussions and problem solving focused on key nutrition and feeding program management concepts related to developing and evaluating lifecycle feeding programs for swine. Diet formulation and evaluation along with estimating nutrient requirements in each stage of production using computer software are key activities of the course. Both undergraduate and graduate students, with some previous coursework in nutrition, who want a comprehensive understanding of all the major considerations of providing optimum cost effective nutrition to swine in all phases of production, are encouraged to take this course.
Style: 50% Lecture, 25% Discussion, 25% Laboratory.
Grading: 5% reports/papers, 30% problem solving, 65% other evaluation. exams
Exam Format: essay, multiple choice, matching, short answer, true/false, problem solving

ANSC 4404 Applied Dairy Nutrition
2 credit(s); prereq AnSc 4403 recommended;
Instructor: Linn,Jim
Description: This course is the application of fundamental nutrition principles (Animal Nutrition, AnSc 2401) and Ruminant Nutrition, AnSc 4403) to dairy cattle nutrition. The course will cover nutrient requirements of dairy cattle, feed ingredient selection and usage, formulation of lactating cow, dry cow and growing heifer diets using least cost and model computer programs. The course will also involve analysis of case study feeding programs used on dairy farms. Both undergraduate and graduate students who want a comprehensive practical understanding of nutrition programming on dairy farms are encouraged to enroll. The course will include discussion, lecture, and use of computers to formulate and evaluate dairy rations.
Style: 20% Lecture, 30% Discussion. Computer use to formulate and evaluate dairy rations
Grading: 20% final exam, 20% class participation, 60% problem solving.
Exam Format: Exams will be homework problems related to formulation or evaluation of dairy rations.

ANSC 4603 Beef Production Systems Management
4 credit(s); prereq Concurrent registration is required (or allowed) in 4613;
Instructor: DiCostanzo,Alfredo
Description: Student may contact the instructor or department for information.

ANSC 4613 Advanced Beef Production Systems Management
2 credit(s); prereq 4603;
Instructor: DiCostanzo,Alfredo
Description: Student may contact the instructor or department for information.

ANSC 5200 Statistical Genetics and Genomics
4 credit(s); prereq [Stat 3021 or equiv], [Biol 4003 or equiv];
Credit will not be granted if credit has been received for: CMB 5200;
Instructor: Da,Yang
Description: Student may contact the instructor or department for information.

ANSC 5625 Nutritional Biochemistry
3 credit(s); prereq BIOC 3021 or instr consent ;
Instructor: Chen,Chi
Description: Student may contact the instructor or department for information.

ANSC 5700 Cell Physiology
A-F only, 4 credit(s); prereq [Two semesters of physics/chemistry, calculus, one semester of systems-level physiology] or instr consent ;
Instructor: Palmer,Melissa L
Description: Student may contact the instructor or department for information.

ANTH 1001 Human Evolution
4 credit(s); Meets CLE req of Biological Sciences;
Instructor: Monnier,Gilliane F
Description: Student may contact the instructor or department for information.

ANTH 1003W Understanding Cultures
4 credit(s); Meets CLE req of Global Perspectives; meets CLE req of Social Sciences; meets CLE req of Writing Intensive;
Instructor: STAFF
Description: Introduction to social and cultural anthropology for undergraduate majors and non-majors. Comparative study of
societies and cultures around the world. Topics include adaptive strategies; economic processes; kinship, marriage and gender; social stratification; politics and conflict; religion and ritual; personality and culture. We will survey a variety of human cultures and explore theories about the evolution, function and meaning of culture.

**Style:** 75% Lecture, 25% Discussion.

**Exam Format:** multiple choice; essay

**ANTH 1005W Introduction to Cultural Diversity and the World System**

4 credit(s); Meets CLE req of Global Perspectives; meets CLE req of Social Sciences; meets CLE req of Writing Intensive;

**Instructor:** Lipset, David M

**Description:** This course will focus on relations between culture and the globalization process. How are migration, communication, and global capitalism changing local understandings of identity, ways of life, etc.? The course will look at peoples and cultures inside and outside of the U.S. It is an introductory course in cultural anthropology which targets both students seeking to fulfill CLE requirements and prospective majors. Teaching will involve lecture format, multi-media presentations and active learning in recitation sections. The books will include a textbook, such as "On Being Different" by Kottak and a reader, such as "Talking About People" by Howland and Gordon, eds. There will also be two writing assignments, based on such books as "New Pioneers in the Heartland: Hmong Life in Wisconsin," by Koltky. In addition, there will be 3 multiple choice mid-terms.

**Style:** 50% Lecture, 25% Discussion. video presentations

**Grading:** 60% mid exam, 20% final exam, 20% reports/papers. also 10% class participation and 10% lab work

**Exam Format:** multiple choice

**ANTH 1905 Freshman Seminar**

A-F only, 3 credit(s); prereq Fr;

**Instructor:** Wolpert, Barbara

**Description:** Student may contact the instructor or department for information.

**ANTH 1909W Freshman Seminar**

A-F only, 3 credit(s); prereq freshman; Meets CLE req of Writing Intensive;

**Instructor:** Beeman, William O

**Description:** Student may contact the instructor or department for information.

**ANTH 3001 Introduction to Archaeology**

4 credit(s); Meets CLE req of Social Sciences;

**Instructor:** Monnier, Gilliane F

**Description:** Archaeology is the study of humans in the past. It seeks to answer fundamental questions, such as ?when did humans first become dependent on fire??, ?what factors led to the development of agriculture?? or ?how can we explain the rise and fall of early civilizations?? The study of each of these big questions relies on answering many small questions that are asked in the context of excavations and other archaeological analyses. The aim of this class is to provide an understanding of the methods and techniques used by archaeologists in investigating these questions. It includes not only hands-on learning of specific analytical techniques, such as faunal and lithic analysis, survey and excavation, but also focuses on the theoretical approaches that guide the questions archaeologists ask and the methods they use to answer them. This class, therefore, prepares students for more advanced classes in the discipline. It also requires students to think about how data are interpreted and how these interpretations are shaped by theoretical frameworks and archaeologists? worldviews. Devising solutions to interpretive problems requires the creative application of multidisciplinary approaches. Ultimately, the study of archaeology leads to a new way of thinking about and doing science.

**Style:** 90% Lecture, 5% Film/Video, 5% Guest Speakers.

**Grading:** 45% mid exam, 25% final exam, 25% laboratory evaluation, 5% other evaluation. Active learning Assignments are worth 5% of the final grade.

**Exam Format:** Exams are multiple-choice and short-answer.

**ANTH 3002 Sex, Evolution, and Behavior: Examining Human Evolutionary Biology**

A-F only, 4 credit(s); Credit will not be granted if credit has been received for: EEB 3002;

**Instructor:** Wilson, Michael Lawrence

**Description:** Evolutionary theory provides unique insights into fundamental aspects of human behavior, including sex differences, courtship, marriage, reproduction, aggression and cooperation. In this course, lectures, reading and discussion of primary literature help students develop a critical understanding of the theory, methods, and findings of this rapidly growing field.

**ANTH 3003 Cultural Anthropology**

3 credit(s); Credit will not be granted if credit has been received for: GLOS 3003;

**Instructor:** Song, Hoon

**Description:** This course introduces the subfield of Cultural Anthropology through the sampling of what cultural anthropologists mainly do: fieldwork, whose product is ethnography. Throughout the term, we closely read four ethnographies, and a handful of supplemental readings to guide them. The goal is to pay attention not only to the subject-matter narrated in each ethnography ? i.e., the culture described ? but also to the contexts in which the narrative as a constructed text is made possible. Such ?contexts? include the author/anthropologist?s own culture, the biographical person of the author, the particular genre of writing called ethnography, and the imperatives of literary form itself. From this perspective, the following questions should be always born in mind while reading the ethnographies: What is the nature of the culture described?; What is the definition of culture for the author?; What does the author choose to include under that umbrella concept of culture?; What is the nature of the author?s culture, said or presumed; or, which is closely related, what is the nature of the presumed culture that the author uses to convey his or her narrative to the reader?; Can you guess what kind of person the author might have been in the fieldwork?; What sort of things might have been privileged or left out because of the particular style and form of writing chosen? The operating presupposition in this course is that an observation of a (foreign) culture does not take place in a vacuum, but rather at an intersection between multiple cultures. In other words, an ethnography always bears witness to, what one might call, ?cultural dialogue.? The spirit of the course is a collaborative effort whereby the students and the instructor together ?paint? the milieu of such an intersection which is implied but not explicitly described in each ethnography. For this goal, the task of utmost importance is the very close reading of each ethnography as a finished and closed text ? with its own logic, rhetorical structure, and internal contradictions ? as we would with any literary work.

**ANTH 3027W Archaeology of Prehistoric Europe**

3 credit(s); Credit will not be granted if credit has been received for: ANTH 5027W; Meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;

**Instructor:** Wells, Peter S

**Description:** Survey of the archaeology of Europe, from the earliest evidence of human presence about one million years ago to the Roman conquest of about two thousand years ago. Major topics include the development of art in the Early Stone Age, adoption of agriculture and village life during the Neolithic, early metallurgy and long-distance trade during the Bronze Age, and formation of cities in the Iron Age.

**Style:** 95% Lecture, 5% Discussion.

**Grading:** 30% mid exam, 25% final exam, 40% reports/papers, 5% quizzes.

**ANTH 3306W Medical Anthropology**

A-F only, 3 credit(s); prereq 1003 or 1005 or entry level soc sci course recommended; Meets CLE req of Global Perspectives; meets CLE req of Writing Intensive;

**Instructor:** Taussig, Karen Sue

**Description:** Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
ANTH 3913 Senior Project Planning
1 credit(s); prereq [Jr or sr] anth major, instr consent;
Instructor: Wells, Peter S
Description: Student may contact the instructor or department for information.

ANTH 3913 Senior Project Planning
1 credit(s); prereq [Jr or sr] anth major, instr consent;
Instructor: Raheja, Gloria Goodwin
Description: Student may contact the instructor or department for information.

ANTH 3913 Senior Project Planning
1 credit(s); prereq [Jr or sr] anth major, instr consent;
Instructor: Gudeman, Stephen Frederick
Description: Student may contact the instructor or department for information.

ANTH 3913 Senior Project Planning
1 credit(s); prereq [Jr or sr] anth major, instr consent;
Instructor: Gibbon, Guy E
Description: Student may contact the instructor or department for information.

ANTH 3913 Senior Project Planning
1 credit(s); prereq [Jr or sr] anth major, instr consent;
Instructor: Tappan, Martha
Description: Student may contact the instructor or department for information.

ANTH 3913 Senior Project Planning
1 credit(s); prereq [Jr or sr] anth major, instr consent;
Instructor: Lipset, David M
Description: Student may contact the instructor or department for information.

ANTH 3913 Senior Project Planning
1 credit(s); prereq [Jr or sr] anth major, instr consent;
Instructor: Langford, Jean M
Description: Student may contact the instructor or department for information.

ANTH 3913 Senior Project Planning
1 credit(s); prereq [Jr or sr] anth major, instr consent;
Instructor: Taussig, Karen-Sue
Description: Student may contact the instructor or department for information.

ANTH 3913 Senior Project Planning
1 credit(s); prereq [Jr or sr] anth major, instr consent;
Instructor: Toetevin, Gilbert B
Description: Student may contact the instructor or department for information.

ANTH 3913 Senior Project Planning
1 credit(s); prereq [Jr or sr] anth major, instr consent;
Instructor: Wilson, Michael Lawrence
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1 credit(s); max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Wells, Peter S
Description: Student may contact the instructor or department for information.

ANTH 4001 Advanced Method and Theory in Archaeology
3 credit(s); prereq 1001 or 3001;
Instructor: Soderberg, John A
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Beeman, William O
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: McLeay, Stuart J
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Hayes, Katherine F. H.
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Gudeman, Stephen Frederick
Description: Student may contact the instructor or department for information.
ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Lipset, David M
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Langford, Jean M
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Toetevin, Gilbert B
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Wilson, Michael Lawrence
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Monnier, Gillian F
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Ho, Karen
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Valentine, David
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: McLean, Stuart J
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Song, Hoon
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Project
1-3 credit(s), max credits 3, 1 completion allowed; prereq sr major, instr consent;
Instructor: Beeman, William O
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: McNulty, Kieran P
Description: Student may contact the instructor or department for information.

ANTH 4013 Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Hayes, Katherine F. H.
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Wells, Peter S
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Raheja, Gloria Goodwin
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Gibbon, Guy E
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Gudeman, Stephen Frederick
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Hayes, Katherine F. H.
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Lipset, David M
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: McNulty, Kieran P
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: McLean, Stuart J
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Langford, Jean M
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Taussig, Karen-Sue
Description: Student may contact the instructor or department for information.
ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Wilson, Michael Lawrence
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Monnier, Gilliane F
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Beeman, William O
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: McNulty, Kieran P
Description: Student may contact the instructor or department for information.

ANTH 4013H Senior Honors Thesis Project
A-F only, 3 credit(s); prereq Sr major, honors student, instr consent;
Instructor: Hayes, Katherine F. H.
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Reaheja, Gloria Goodwin
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Gudeman, Stephen Frederick
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Gibbon, Guy E
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Tappen, Martha
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Lipset, David M
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Langford, Jean M
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Taussig, Karen-Sue
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Tostevin, Gilbert B
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Wilson, Michael Lawrence
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Monnier, Gilliane F
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Ho, Karen
Description: Student may contact the instructor or department for information.
Schedule.

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ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Valentine, David
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: McLean, Stuart J
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Song, Hoon
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Beeman, William O
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: McNulty, Kieran P
Description: Student may contact the instructor or department for information.

ANTH 4991 Independent Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Hayes, Katherine F. H.
Description: Student may contact the instructor or department for information.

ANTH 4992 Directed Readings
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Wells, Peter S
Description: Student may contact the instructor or department for information.

ANTH 4992 Directed Readings
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Tappan, Martha
Description: Student may contact the instructor or department for information.

ANTH 4992 Directed Readings
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Gibbon, Guy E
Description: Student may contact the instructor or department for information.

ANTH 4992 Directed Readings
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Gudeman, Stephen Frederick
Description: Student may contact the instructor or department for information.

ANTH 4992 Directed Readings
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Gibbon, Guy E
Description: Student may contact the instructor or department for information.

ANTH 4992 Directed Readings
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Tappan, Martha
Description: Student may contact the instructor or department for information.

ANTH 4992 Directed Readings
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Langford, Jean M
Description: Student may contact the instructor or department for information.

ANTH 4992 Directed Readings
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: McNulty, Kieran P
Description: Student may contact the instructor or department for information.

ANTH 4992 Directed Readings
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Tappan, Martha
Description: Student may contact the instructor or department for information.
ANTH 4992 Directed Readings
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; 
Instructor: McNulty,Kieran P 
Description: Student may contact the instructor or department for information.

ANTH 4993 Directed Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; 
Instructor: Hayes,Katherine F. H. 
Description: Student may contact the instructor or department for information.

ANTH 4993 Directed Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; 
Instructor: Lipset,David M 
Description: Student may contact the instructor or department for information.

ANTH 4993 Directed Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; 
Instructor: Langford,Jean M 
Description: Student may contact the instructor or department for information.

ANTH 4993 Directed Study
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; 
Instructor: Taussig,Karen-Sue 
Description: Student may contact the instructor or department for information.

ANTH 4993W Directed Research
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; 
Instructor: Song,Hoon 
Description: Student may contact the instructor or department for information.

ANTH 4994W Directed Research
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; 
Instructor: Wells,Peter S 
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
ANTH 4994W Directed Research  
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; Meets CLE req of Writing Intensive;  
Instructor: Ho,Karen  
Description: Student may contact the instructor or department for information.

ANTH 4994W Directed Research  
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; Meets CLE req of Writing Intensive;  
Instructor: Raheja,Gloria Goodwin  
Description: IMPORTANT: Before you attend the first class, verify the room location in the online Class Guide at http://onestop.umn.edu. This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online University of Minnesota - Course Guide for Twin Cities Campus Fall 2011

ANTH 4994W Directed Research  
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; Meets CLE req of Writing Intensive;  
Instructor: Guzman,Stephen Frederick  
Description: Student may contact the instructor or department for information.

ANTH 4994W Directed Research  
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; Meets CLE req of Writing Intensive;  
Instructor: Gibbon,Guy E  
Description: Student may contact the instructor or department for information.

ANTH 4994W Directed Research  
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; Meets CLE req of Writing Intensive;  
Instructor: Tappen,Martha  
Description: Student may contact the instructor or department for information.

ANTH 4994W Directed Research  
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; Meets CLE req of Writing Intensive;  
Instructor: Lipsett,David M  
Description: Student may contact the instructor or department for information.

ANTH 4994W Directed Research  
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; Meets CLE req of Writing Intensive;  
Instructor: Langford,Jean M  
Description: Student may contact the instructor or department for information.

ANTH 4994W Directed Research  
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; Meets CLE req of Writing Intensive;  
Instructor: Taussig,Karen-Sue  
Description: Student may contact the instructor or department for information.

ANTH 4994W Directed Research  
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; Meets CLE req of Writing Intensive;  
Instructor: Tostevin,Gilbert B  
Description: Student may contact the instructor or department for information.

ANTH 4994W Directed Research  
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; Meets CLE req of Writing Intensive;  
Instructor: Wilson,Michael Lawrence  
Description: Student may contact the instructor or department for information.

ANTH 4994W Directed Research  
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; Meets CLE req of Writing Intensive;  
Instructor: Tostevin,Gilbert B  
Description: Survey of the archaeology of Europe, from the earliest evidence of human presence about one million years ago to the Roman conquest of about two thousand years ago. Major topics include the development of art in the Early Stone Age, adoption of agriculture and village life during the Neolithic, early metallurgy and long-distance trade during the Bronze Age, and formation of cities in the Iron Age.  
Style: 95% Lecture, 5% Discussion.  
Grading: 30% mid exam, 25% final exam, 40% reports/papers, 5% quizzes.

ANTH 5027W Origins of European Civilization  
3 credit(s); Credit will not be granted if credit has been received for: ANTH 3027W; Meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;  
Instructor: Wells,Peter S  
Description: Student may contact the instructor or department for information.

ANTH 5269 Analysis of Stone Tool Technology  
1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent; Meets CLE req of Writing Intensive;  
Instructor: Tostevin,Gilbert B  
Description: An archaeologist once stated "Love is fickle but stone tools are forever." This course takes this principle to heart in order to teach serious undergraduates and beginning graduate students how archaeologists can learn what it means to be human through the study of our ancestors' stone tools. From a scientific point of view, as the vast majority of human existence has been spent using stone tools as the primary medium for the interaction between humans and the environment, understanding the causes of change in stone tool variation through time is fundamental to understanding the human past. The goals of this course include 1) a comprehensive survey of known stone tool making processes (known as flintknapping), 2) a critical examination of different traditions of studying stone tools among for information.
anthropologists around the world, and 3) practical experience with analyzing an entire stone tool collection from an experimental archaeological site in order to reconstruct the behaviors, from procurement of raw stone to the discard of the exhausted tools, which produced the site and its collection. This course also provides students with hands-on experience in the practice of making stone tools for analysis. This is a practical laboratory class: the successful completion of this course will allow you to perform the tasks required of archaeologists currently working in the Cultural Resource Management industry. Space is limited to 15 students.

Style: 20% Lecture, 50% Laboratory. hands-on flintknapping; 5% films
Grading: 45% other evaluation. laboratory reports; 30% final paper; 15% two in-class quizzes; 10% discussion participation
Exam Format: multiple choice and short answer

ANTH 5442 Archaeology of the British Isles
A-F only, 3 credit(s);
Instructor: Wells,Peter S
Description: This course examines the archaeology of the British Isles, with an emphasis on Great Britain. The seminar covers the history of archaeology, as well as the material remains of societies that inhabited the British Isles from some 700,000 years ago to the present. Among the periods covered are the Neolithic, the Bronze Age, the Iron Age, the Roman Period, and the early Middle Ages. Different interpretations of the archaeological material are considered.

Style: 100% Discussion.
Grading: 35% special projects, 55% in-class presentation, 10% class participation.

ANTH 5980 Topics in Anthropology
1-6 credit(s), max credits 12;
Instructor: Wolbert,Barbara
Description: Course description Investigating in particular the significance of photographs in coping with migration, this course touches upon a central feature of photography. Its ability to make present the absent. Rather than as recipients of images produced by mass media we look at immigrants as producers of images: Our point of departure is the socially extremely effective but often-underestimated individual image production. We will focus on private photographs, on photos taken, owned and circulated by migrants. These photographs, which may or may not depict immigrants, refugees or displaced persons open insights into immigrants lives on multiple levels. Beyond the study of the narratives of those who are in the photo and of those, who took it and who hold on to it, the study of practices of collecting, framing, and displaying of photographs allows us to better understand processes of identification. By comparing earlier photograph collections of migrant families to more recent snapshots - analogue and digital - as well as to migrants video, internet, and mobile phone practices, we will explore immigrants changing sense of place and their migratory concepts. We will hence discuss legacies of first generations of immigrants and constructions of neighborhoods, real and virtual. In a second step we juxtapose these visual practices with visual representations of migration in the press and other mass media, using them as a key to public discourses on migration, shaping immigration policies and integration politics.

Objectives and Topics: The course will enhance the students sensitivity for the relation between text and images. It will be based on the analysis of images, the discussion of theoretical essays and on students case studies that aims at analyzing family photographs and their social uses. These case studies are based on individually designed intensive short-term fieldwork projects, conducted and supervised during the semester. Presentations of the results of students case studies will complete the course work. The case studies will relate to the course readings, they will serve as an individually scheduled training program in the analysis of photographs. The course will thus guide the students in studying vernacular forms of expressive culture and in conducting narrative interviews and encourage them to articulate themselves both through words and the use of images. This course on the social use of photography in the context of global migration thus bridges between migration research and media studies. Concerned with questions of migrants visual communication, memory, and representation, it covers basic concepts of visual cultural studies and fieldwork techniques.

Style: 40% Lecture, 5% Film/Video, 40% Discussion, 10% Student Presentation, 5% Field Trips.
Grading: 55% reports/papers, 10% special projects, 5% quizzes, 15% in-class presentation, 15% class participation, Homework assignments, fieldwork notes and other notes related to the coursework may be submitted for extra credit (-0.5 of final grade)

ANTH 5980 Topics in Anthropology
1-6 credit(s), max credits 12;
Instructor: Wolbert,Barbara
Description: Course description Investigating in particular the significance of photographs in coping with migration, this course touches upon a central feature of photography. Its ability to make present the absent. Rather than as recipients of images produced by mass media we look at immigrants as producers of images: Our point of departure is the socially extremely effective but often-underestimated individual image production. We will focus on private photographs, on photos taken, owned and circulated by migrants. These photographs, which may or may not depict immigrants, refugees or displaced persons open insights into immigrants lives on multiple levels. Beyond the study of the narratives of those who are in the photo and of those, who took it and who hold on to it, the study of practices of collecting, framing, and displaying of photographs allows us to better understand processes of identification. By comparing earlier photograph collections of migrant families to more recent snapshots - analogue and digital - as well as to migrants video, internet, and mobile phone practices, we will explore immigrants changing sense of place and their migratory concepts. We will hence discuss legacies of first generations of immigrants and constructions of neighborhoods, real and virtual. In a second step we juxtapose these visual practices with visual representations of migration in the press and other mass media, using them as a key to public discourses on migration, shaping immigration policies and integration politics.

Objectives and Topics: The course will enhance the students sensitivity for the relation between text and images. It will be based on the analysis of images, the discussion of theoretical essays and on students case studies that aims at analyzing family photographs and their social uses. These case studies are based on individually designed intensive short-term fieldwork projects, conducted and supervised during the semester. Presentations of the results of students case studies will complete the course work. The case studies will relate to the course readings, they will serve as an individually scheduled training program in the analysis of photographs. The course will thus guide the students in studying vernacular forms of expressive culture and in conducting narrative interviews and encourage them to articulate themselves both through words and the use of images. This course on the social use of photography in the context of global migration thus bridges between migration research and media studies. Concerned with questions of migrants visual communication, memory, and representation, it covers basic concepts of visual cultural studies and fieldwork techniques.

Style: 40% Lecture, 5% Film/Video, 40% Discussion, 10% Student Presentation, 5% Field Trips.
Grading: 55% reports/papers, 10% special projects, 5% quizzes, 15% in-class presentation, 15% class participation, Homework assignments, fieldwork notes and other notes related to the coursework may be submitted for extra credit (-0.5 of final grade)

ANTH 5980 Topics in Anthropology
1-6 credit(s), max credits 12;
Instructor: Wolbert,Barbara
Description: Course description Investigating in particular the significance of photographs in coping with migration, this course touches upon a central feature of photography. Its ability to make present the absent. Rather than as recipients of images produced by mass media we look at immigrants as producers of images: Our point of departure is the socially extremely effective but often-underestimated individual image production. We will focus on private photographs, on photos taken, owned and circulated by migrants. These photographs, which may or may not depict immigrants, refugees or displaced persons open insights into immigrants lives on multiple levels. Beyond the study of the narratives of those who are in the photo and of those, who took it and who hold on to it, the study of practices of collecting, framing, and displaying of photographs allows us to better understand processes of identification. By comparing earlier photograph collections of migrant families to more recent snapshots - analogue and digital - as well as to migrants video, internet, and mobile phone practices, we will explore immigrants changing sense of place and their migratory concepts. We will hence discuss legacies of first generations of immigrants and constructions of neighborhoods, real and virtual. In a second step we juxtapose these visual practices with visual representations of migration in the press and other mass media, using them as a key to public discourses on migration, shaping immigration policies and integration politics.

Objectives and Topics: The course will enhance the students sensitivity for the relation between text and images. It will be based on the analysis of images, the discussion of theoretical essays and on students case studies that aims at analyzing family photographs and their social uses. These case studies are based on individually designed intensive short-term fieldwork projects, conducted and supervised during the semester. Presentations of the results of students case studies will complete the course work. The case studies will relate to the course readings, they will serve as an individually scheduled training program in the analysis of photographs. The course will thus guide the students in studying vernacular forms of expressive culture and in conducting narrative interviews and encourage them to articulate themselves both through words and the use of images. This course on the social use of photography in the context of global migration thus bridges between migration research and media studies. Concerned with questions of migrants visual communication, memory, and representation, it covers basic concepts of visual cultural studies and fieldwork techniques.

Style: 40% Lecture, 5% Film/Video, 40% Discussion, 10% Student Presentation, 5% Field Trips.
Grading: 55% reports/papers, 10% special projects, 5% quizzes, 15% in-class presentation, 15% class participation, Homework assignments, fieldwork notes and other notes related to the coursework may be submitted for extra credit (-0.5 of final grade)
ANTH 8810 Topics in Sociocultural Anthropology
3-9 credit(s), max credits 9, 3 completions allowed;
Instructor: Langford, Jean M
Description: Student may contact the instructor or department for information.

ANTH 8810 Topics in Sociocultural Anthropology
3-9 credit(s), max credits 9, 3 completions allowed;
Instructor: Deutsch, Tracey A
Description: Student may contact the instructor or department for information.

ANTH 8810 Topics in Sociocultural Anthropology
3-9 credit(s), max credits 9, 3 completions allowed;
Instructor: McLean, Stuart J
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Wells, Peter S
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Gudeman, Stephen Frederick
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Gibbon, Guy E
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Tappen, Martha
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Lipset, David M
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Langford, Jean M
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Taussig, Karen-Sue
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Tostevin, Gilbert B
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Wilson, Michael Lawrence
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Monnier, Gilliane F
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Ho, Karen
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Valentine, David
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: McNulty, Kieran P
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Beeman, William O
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: McNulty, Kieran P
Description: Student may contact the instructor or department for information.

ANTH 8991 Independent Study
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Hayes, Katherine F. H.
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Wells, Peter S
Description: Student may contact the instructor or department for information.
ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Raheja, Gloria Goodwin
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Gudeman, Stephen Frederick
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Gibbon, Guy E
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Tappen, Martha
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Lipsett, David M
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Langford, Jean M
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Taussig, Karen-Sue
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Tostevin, Gilbert B
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Wilson, Michael Lawrence
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Monnier, Gilliane F
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Ho, Karen
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Valentine, David
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: McLean, Stuart J
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Song, Hoon
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: Beeman, William O
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 1 completion allowed; prereq instructor consent;
Instructor: McNulty, Kieran P
Description: Student may contact the instructor or department for information.

ANTH 8992 Directed Reading
1-18 credit(s), max credits 18, 3 completions allowed; prereq instructor consent;
Instructor: Wells, Peter S
Description: Student may contact the instructor or department for information.

ANTH 8993 Directed Study
1-18 credit(s), max credits 18, 3 completions allowed; prereq instructor consent;
Instructor: Gudeman, Stephen Frederick
Description: Student may contact the instructor or department for information.
ANTH 8993 Directed Study
1-18 credit(s), max credits 18, 3 completions allowed; prereq instr consent;
Instructor: Taussig,Karen-Sue
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Gibbon,Guy E
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: McNulty,Kieran P
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Wells,Peter S
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Gudeman,Stephen Frederick
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Weeks,Peter
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: McNulty,Kieran P
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Tappen,Martha
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: McNulty,Kieran P
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Hayes,Janet
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: McNulty,Kieran P
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: McNulty,Kieran P
Description: Student may contact the instructor or department for information.

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Instructor: McNulty,Kieran P
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: McNulty,Kieran P
Description: Student may contact the instructor or department for information.
ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Tostevin, Gilbert B
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Wilson, Michael Lawrence
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Monnier, Gilliane F
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Beeman, William O
Description: Student may contact the instructor or department for information.

ANTH 8994 Directed Research
1-18 credit(s), max credits 18, 1 completion allowed; prereq instr consent;
Instructor: Hayes, Katherine F. H.
Description: Student may contact the instructor or department for information.

ADES 1221 Apparel Assembly Fundamentals
A-F only, 3 credit(s); prereq Pre-apparel design major or instr consent credit will not be granted if credit already received for: DHA 1221;
Instructor: STAFF
Description: Introduction to the study of basic clothing structure through analysis of existing garments and application of basic sewing principles for creating new garments. The objectives of the course are: 1) To learn basic clothing assembly skills by studying existing garments and 2) To apply basic sewing fundamentals by creating several basic garments. This class is designed for pre-Clothing Design majors or those students interested in Clothing Design (instructor permission requested). The class is designed for studio learning opportunities with supporting lecture and demonstration. Project work requires an average of 10 hours outside of class.
Style: 25% Lecture. 75% Laboratory.
Grading: 50% final exam, 30% special projects, 20% quizzes.
Exam Format: Multiple choice, true/false, fill in the blank

ADES 2196 Work Experience in Apparel Design
S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent;
Instructor: LaBat, Karen Louise
Description: Student may contact the instructor or department for information.

ADES 2196 Work Experience in Apparel Design
S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent;
Instructor: Bye, Elizabeth Kersch
Description: Student may contact the instructor or department for information.

ADES 2196 Work Experience in Apparel Design
S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent;
Instructor: DeLong, Marilyn R
Description: Student may contact the instructor or department for information.

ADES 2196 Work Experience in Apparel Design
S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent;
Instructor: Dunne, Lucy Elizabeth
Description: Student may contact the instructor or department for information.

ADES 2213 Textile Analysis
A-F only, 4 credit(s); prereq DHA major or pre-major or instr consent credit will not be granted if credit already received for: DHA 2213;
Instructor: LaBat, Karen Louise
Description: Student may contact the instructor or department for information.

ADES 2222 Apparel Design Studio II
A-F only, 4 credit(s); prereq [2221 or DHA 2221] with a grade of at least C-, Apparel Design major, pass portfolio review credit will not be granted if credit already received for: DHA 2222;
Instructor: Dunne, Lucy Elizabeth
Description: Student may contact the instructor or department for information.

ADES 3217 Fashion: Trends and Communication
A-F only, 3 credit(s); prereq credit will not be granted if credit already received for: DHA 3217;
Instructor: Wu, Juanjuan
Description: Student may contact the instructor or department for information.
ADES 3223 Apparel Design Studio III  
A-F only, 3 credit(s); prereq [2222 or DHA 2222] with grade of at least C-. Apparel Design major, pass portfolio review credit will not be granted if credit already received for: DHA 3223;  
Instructor: STAFF  
Description: This course is designed for clothing design majors as part of the clothing design studio sequence. The study of tailored and non-tailored clothing structures is covered. Experimentation with a variety of materials and structures using innovative methods is explored and implemented with a series of garments.  
Style: 15% Lecture, studio work  
Grading: 80% special projects, 10% in-class presentation, 10% laboratory evaluation.

ADES 4160H Honors Capstone Project  
A-F only, 2 credit(s), max credits 4; prereq DHA honors;  
Instructor: LaBat,Karen Louise  
Description: Student may contact the instructor or department for information.

ADES 4160H Honors Capstone Project  
A-F only, 2 credit(s), max credits 4; prereq DHA honors;  
Instructor: Bye,Elizabeth Kersch  
Description: Student may contact the instructor or department for information.

ADES 4160H Honors Capstone Project  
A-F only, 2 credit(s), max credits 4; prereq DHA honors;  
Instructor: DeLong,Marilyn R  
Description: Student may contact the instructor or department for information.

ADES 4193 Directed Study in Apparel Design  
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;  
Instructor: DeLong,Marilyn R  
Description: Student may contact the instructor or department for information.

ADES 4193 Directed Study in Apparel Design  
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;  
Instructor: Bye,Elizabeth Kersch  
Description: Student may contact the instructor or department for information.

ADES 4193 Directed Study in Apparel Design  
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;  
Instructor: Dunne,Lucy Elizabeth  
Description: Student may contact the instructor or department for information.

ADES 4193 Directed Study in Apparel Design  
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;  
Instructor: Dunne,Lucy Elizabeth  
Description: Student may contact the instructor or department for information.

ADES 4196 Internship in Apparel Design  
S-N only, 1-4 credit(s), max credits 4, 1 completion allowed; prereq Completion of at least one-half of professional sequence, plan submitted and approved in advance by adviser and internship supervisor, written consent of faculty supervisor, instr consent credit will not be granted if credit already received for: DHA 4196; Credit will not be granted if credit has been received for: GDES 4196;  
Instructor: STAFF  
Description:  

ADES 4225 Apparel Design Studio V  
A-F only, 3 credit(s); prereq [[3224 or DHA 3224], [3225 or DHA 3225]] with grade of at least C-, apparel design major credit will not be granted if credit already received for: DHA 4225;  
Instructor: Bye,Elizabeth Kersch  
Description: Senior level studio based course. Students use the design process to research and develop a marketable line of garments in preparation for public presentation  
Style: 15% Lecture. Studio  
Grading: 20% reports/papers, 80% special projects.

Apparel Studies  
240 McNeal Hall

APST 5117 Retail Environments and Human Behavior  
A-F only, 3 credit(s); prereq Grad student or instr consent;  
Instructor: Wu,Juanjuan  
Description: Theory and research related to the designed environment across retail channels. Upon completion of this course, students should be able to: -- Analyze the importance of retail environments as stimuli to consumer behavior. -- Develop sensitivity to sustainability issues in retailing. -- Identify, synthesize, and critique research and theories applicable to various retailing formats and environments. -- Design, develop, and conduct original research focusing on retail environments. -- Develop and refine critical writing skills in communicating and disseminating scholarship.

APST 5123 Living in a Consumer Society  
A-F only, 3 credit(s); prereq Sr or grad student credit will not be granted if credit already received for: DHA 5123;  
Instructor: Kim,Hye-Young  
Description: Student may contact the instructor or department for information.

APST 5193 Directed Study in Apparel Studies  
A-F only, 1-4 credit(s); prereq instr consent;  
Instructor: STAFF  
Description: Directed study in design, housing and apparel. The topics, course content and readings are developed under the guidance of the supervising faculty member. Typically reserved for graduate students.  
Style: Working with supervising faculty  
Grading: 100% reports/papers. Or may be related to a project

APST 8192 Readings in Apparel Studies  
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent credit will not be granted if credit already received for: DHA 8192;  
Instructor: LaBat,Karen Louise  
Description: Student may contact the instructor or department for information.

APST 8192 Readings in Apparel Studies  
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent credit will not be granted if credit already received for: DHA 8192;  
Instructor: Bye,Elizabeth Kersch  
Description: Student may contact the instructor or department for information.

APST 8192 Readings in Apparel Studies  
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent credit will not be granted if credit already received for: DHA 8192;  
Instructor: Johnson PhD,Kim KP  
Description: Student may contact the instructor or department for information.
APST 8192 Readings in Apparel Studies
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent credit will not be granted if credit already received for: DHA 8192;
Instructor: DeLong, Marilyn R
Description: Student may contact the instructor or department for information.

APST 8192 Readings in Apparel Studies
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent credit will not be granted if credit already received for: DHA 8192;
Instructor: Wu, Juanjuan
Description: Student may contact the instructor or department for information.

APST 8192 Readings in Apparel Studies
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent credit will not be granted if credit already received for: DHA 8192;
Instructor: Kim, Hye-Young
Description: Student may contact the instructor or department for information.

APST 8193 Directed Study
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent credit will not be granted if credit already received for: DHA 8193;
Instructor: Dunne, Lucy Elizabeth
Description: Student may contact the instructor or department for information.

APST 8193 Directed Study
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent credit will not be granted if credit already received for: DHA 8193;
Instructor: By, Elizabeth Kersch
Description: Student may contact the instructor or department for information.

APST 8822 Plan B Master's Project
S-N only, 3 credit(s); prereq DHA master's student, instr consent credit will not be granted if credit already received for: DHA 8222;
Instructor: DeLong, Marilyn R
Description: Student may contact the instructor or department for information.

APST 8822 Plan B Master's Project
S-N only, 3 credit(s); prereq DHA master's student, instr consent credit will not be granted if credit already received for: DHA 8222;
Instructor: Wu, Juanjuan
Description: Student may contact the instructor or department for information.

APST 8822 Plan B Master's Project
S-N only, 3 credit(s); prereq DHA master's student, instr consent credit will not be granted if credit already received for: DHA 8222;
Instructor: Johnson PhD, Kim KP
Description: Student may contact the instructor or department for information.

APST 8822 Plan B Master's Project
S-N only, 3 credit(s); prereq DHA master's student, instr consent credit will not be granted if credit already received for: DHA 8222;
Instructor: DeLong, Marilyn R
Description: Student may contact the instructor or department for information.

APST 8822 Plan B Master's Project
S-N only, 3 credit(s); prereq DHA master's student, instr consent credit will not be granted if credit already received for: DHA 8222;
Instructor: Kim, Hye-Young
Description: Student may contact the instructor or department for information.

APST 8822 Plan B Master's Project
S-N only, 3 credit(s); prereq DHA master's student, instr consent credit will not be granted if credit already received for: DHA 8222;
Instructor: Dunne, Lucy Elizabeth
Description: Student may contact the instructor or department for information.
ABUS 3051 Career Skills in the Professional Environment  
2 credit(s); prereq 60 semester cr;  
Instructor: Bonderson, Lori  
Description: This fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Career planning and job search processes appropriate to business/professional careers in corporate culture. Exploring career options: career centers, company research and networking, Resume and cover letter writing. Job interview preparation. Organizational culture and job satisfaction. Business etiquette.  
Style: Online  
Grading: - Self-Introduction, 4 Discussions, and 2 Live Chats  
12% - Cover Letter 10% - Resume 10% - Networking Assignment 10% - Career Center Visit 10% - Course Project: Progress Report 3% - Company Research 10% - Interview Preparation 10% - Final Project 25%  
ABUS 3065 Computer Security for the Business Professional  
3 credit(s); prereq Basic computer/internet navigation skills, laptop with minimum 2GB ram/DVD player/Windows XP;  
Instructor: Estrem, LeAllan James  
Description: Fundamental concepts of computer security without technical jargon. Real-world examples and issues. Practices for safe, secure and ethical computer use: virus, worms and malware detection and elimination; antivirus and firewall selection; secure Internet purchasing; using social networking sites; web page set-up.  
Style: 100% Web Based.  
Grading: - 20% mid exam, 20% final exam, 10% special projects, 10% class participation. - 12 article questions (10%) - 11 discussion postings 5 practice files team participation 1 optional project 25%  
ABUS 3301 Introduction to Quality Management  
A-F only, 3 credit(s); prereq Introductory statistics;  
Instructor: Martens, Scott L  
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policy, fee, and financial aid information. Principles and concepts of managing quality in the context of business applications. Emphasizes improvement of business processes with six sigma process improvement methodology. Includes strategy for implementing and leading process improvement, Baldrige Award, ISO 9000, process control, performance measurement systems and Six Sigma.  
Style: 100% Web Based.  
Grading: - 20% mid exam, 20% final exam, 10% special projects, 10% class participation. - 11 article questions (10%) - 11 discussion questions (10%) - 4 group assignments (10%) - self-introduction (0%) - interview (10%)  
ABUS 4012 Strategic Decision Making and Problem Solving  
A-F only, 3 credit(s); prereq 45 cr;  
Instructor: McNamara, Daniel E  
Description: Frameworks and processes for decision-making emphasize: analyzing root causes, effects of problems and solutions within large and small organizations. Focus on creativity and team building in the problem solving heuristic model. Hands-on assignments include case studies, and a final real-world project and online presentation.  
ABUS 4022 Management in Organizations  
A-F only, 3 credit(s); prereq 45 cr completed;  
Instructor: Haaklau, Evon A  
Description: This fully online section is offered through Online and Distance Learning, College of the Continuing Education, Visit "Class URL" for ODL policies, including fee and financial aid restrictions. This course brings together key elements from the practical (on the job), the theoretical (in the classroom), and the personal (self-assessment) to facilitate a better understanding of management as a profession. By the conclusion of this course, you will have learned to: --compare and contrast theoretical and practical thinking on professional management, and apply this knowledge to current practice; --describe and apply the characteristics of a strong manager in a high-performance organization; -- explain and illustrate how planning, organizing, leading, and controlling are accomplished in a specific industry or organization; and -- assess your own aptitude, interest, and knowledge for entering the management profession.  
Style: 100% Web Based.  
Grading: - 8 question of the week discussion postings and responses (4%) - 2 applied management research papers with executive summaries (32%) - A personal assessment and reflection paper (16%) - 3 online quizzes (48%)  
ABUS 4023W Communicating for Results  
A-F only, 3 credit(s); prereq 45 cr completed; Meets CLE req of Writing Intensive;  
Instructor: Lowry, Alice E.  
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Aspects of communication essential for being persuasive/influential. Organizing/presenting ideas effectively, strategies for audience analysis, choosing communication methods, making appropriate use of informal influence methods, handling dissent. Processes for intercultural communication.  
Style: 100% Web Based.  
Grading: - 9 group discussion forums (10%) - Web 2.0 wiki project (20%) - 9 all-class discussion forums (10%) - 9 documents (47%) - 4 Wimba Voice Boards (13%)  
ABUS 4041 Dynamics of Leadership  
A-F only, 3 credit(s); prereq 45 cr completed;  
Instructor: Kaiser, David  
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. In this course, your learning about leadership will occur in two ways: -- learning about and understanding leadership strategies, values, characteristics, and styles (the context) -- analyzing your own perspectives and beliefs about leadership (your interpretation of the context) This course will give you the knowledge and understanding of the qualities and skills necessary to become a leader within various contexts. It will assist you in working in various organizational environments and understanding the impact of globalization and diversity on achieving organizational directives.  
Style: 100% Web Based.  
Grading: - 10% mid exam, 30% final exam, 15% special projects. - self-introduction (1%) - 12 discussions (24%) - 1 self-selected learning assignment (20%)  
ABUS 4043 Project Management in Practice  
A-F only, 3 credit(s); prereq 4102, 45 cr completed;  
Instructor: Griep, Valerie J  
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Project management skills taught in this course will give you a strong foundation upon which to develop your own approach to project management?and save you time, aggravation, and resources! This is a hands-on, "how-to-do-it" course that explores the execution of organizational strategy through project simulations, using best practice processes applicable to all industries. Propel your career with key tools, software, and techniques for planning, executing, and controlling projects. And it's so much more than tools and software! The course presents a holistic view of projects and their role in organizations, the behavioral issues that affect all project participants, and ways to manage stakeholders' expectations. You will . . . ? Learn and apply the keys for a successful project outcome. ? Understand how projects can bring about change and improvement in today's organizations. ? Develop a clear, concise, and effective project-organizing document, including objectives, scope, risks, and deliverables. ? Construct a work breakdown structure and a project network. ? Apply estimated resources to compute a project schedule and end date. ? Use techniques such as slack management, leveling, and "crashing" to optimize the end date under typical real-world constraints. ? Understand organizational factors leading to project success: o Organizational structure types o Leadership, team, and organization techniques o Organizational culture Course Requirements 1 course project 3 team cases 2 exams 7 discussion postings 5 practice files team participation 1 optional reflection paper
ABUS 4101 Accounting and Finance for Managers
A-F only, 3 credit(s); prereq Financial accounting, 45 cr;
Instructor: Vickman, Thomas M
Description: This fully online course is offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policies, including fee and financial aid information. Why should I register for this course? In today's competitive global economy, somebody has to...? Make the product? Serve the customers? Provide the information? Deliver the right product/service/information - at the right time - at the right price - in the correct amount. If these professional challenges intrigue you, this operations management course is meant for you. Operations management knowledge-how comprises some of the most valuable competencies you can add to your professional toolbox. You will prepare yourself to compete at a world-class level. You will come to understand that operations management isn't just a "course," but a professional way of life. The textbook is important, but so many other resources exist to help you acquire these valuable skills?and this course will introduce you to the terminology of management, and the importance of sustainability in business. Characteristics of sustainable environments and their relationship to organizations. Potential economic and strategic enterprise value. Management and leadership to foster and support sustainability. Relationship of sustainable business practices to marketplace trends and realities.
Style: Online
Grading: 144 discussions (25%)-5 short reports or exercises (55%)-Sustainability report (20%)

ABUS 4102 Operations in Manufacturing and Service Businesses
A-F only, 3 credit(s); prereq 45 cr completed;
Instructor: Benraouane, Sid A.
Description: Why should I register for this course? In today's competitive global economy, somebody has to...? Make the product? Serve the customers? Provide the information? Deliver the right product/service/information - at the right time - at the right price - in the correct amount. If these professional challenges intrigue you, this operations management course is meant for you. Operations management knowledge-how comprises some of the most valuable competencies you can add to your professional toolbox. You will prepare yourself to compete at a world-class level. You will come to understand that operations management isn't just a "course," but a professional way of life. The textbook is important, but so many other resources exist to help you acquire these valuable skills?and this course will employ them. You will?Apply the strategic and tactical factors that affect the operation of all production systems. ? Explain and apply operations management theories, policies, and techniques to both the manufacturing and service sectors. ? Evaluate a range of computer tools appropriate for the analysis of a firm's operating system. ? Describe the strategic nature of operations management. ? Interpret factors that affect the selection, design, and operation of costs, and evaluation of operations. ? Analyze and assess the real-world challenges and excitement of operations management. ? Examine and employ operations management with actual organizations. ? Critique and support managerial decisions with regard to operations management. ? Use the terminology of the field. ? Begin to develop a philosophy of operations management that integrates human, ethical, technological, and economic factors.
Course requirements: (1) Self-introduction (1) Group midterm report (1) Group final project (1) Group peer evaluation (5) Individual quantitative operations problem sets (8) Group case studies (14) Individual weekly journal entries on course themes and issues
Style: Online
Grading: 30% special projects, 10% quizzes. -self-introduction (2%) -9 online discussions (18%) -10 problem sets (40%)

ABUS 4104 Management and Human Resource Practices
A-F only, 3 credit(s); prereq 45 cr completed;
Instructor: Benraouane, Sid A.
Description: Introduces students to a broad overview of human resource practices in organizations as well as basic responsibilities of front line managers. Emphasis is on providing day-to-day leadership including organizing work, motivating employees, delegating, coordinating and achieving results. Human resource practices carried out at the front line include selection induction and training of new employees, employee appraisal, handling grievances and discipline.
Style: Online
Grading: 100% Web Based.

ABUS 4151 Innovation for Leaders and Organizations
A-F only, 3 credit(s); prereq 45 cr;
Instructor: Sen, Abir
Description: This fully online course is offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Explore the meaning and importance of sustainability in business. Characteristics of sustainable environments and their relationship to organizations. Potential economic and strategic enterprise value. Management and leadership to foster and support sustainability. Relationship of sustainable business practices to marketplace trends and realities.
Style: Online
Grading: -4 discussions (10%)-self-introduction (1%)-introductory exercise (3%)-5 group cases (15%)-3 group assignments (18%) -self-introduction (1%)-6 written assignments (41%) -3 project (15%)

ABUS 4155 Strategy and Management for a Sustainable Future
A-F only, 3 credit(s); prereq [Macroeconomics or microeconomics], 45 cr;
Instructor: Hickie, Garth Thomas
Description: This fully online course is offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Explore the meaning and importance of sustainability in business. Characteristics of sustainable environments and their relationship to organizations. Potential economic and strategic enterprise value. Management and leadership to foster and support sustainability. Relationship of sustainable business practices to marketplace trends and realities.
Style: Online
Grading: 5% written homework, 10% class participation. -5 group cases (15%) -5 practice files (15%) -optional extra credit (5710 extra credit pts.)

ABUS 4515 Introduction to Marketing
A-F only, 3 credit(s); prereq [Macroeconomics or microeconomics], 45 cr;
Instructor: Aggarwal, Praveen
Description: This fully online course is offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. The course begins with the 4 Ps of marketing and many others. The course will introduce you to the terminology of marketing and demonstrate how marketing relates to other functional areas within an organization. The course will try to expose you to the breadth, rather than depth in any one particular area, of marketing. A discussion of the international scope of marketing and ethics in business will also be integrated into the course at every stage.
APEC 1001 Orientation to Applied Economics
A-F only, 1 credit(s);
Instructor: Cooper, Gary M
Description: Introduction to the curriculum offerings, liberal education requirements, employment opportunities and the faculty in the Department of Applied Economics. This is a required one-credit course for all undergraduates majoring in Agricultural and Food Business Management or in Applied Economics. Emphasis will be placed on the historical development of the discipline, the areas of specialization, course work expectations and career planning (e.g., student self-assessment and analysis of interests, skills and abilities; discussion of opportunities in the field–study abroad experiences summer jobs, and internships).
Style: 65% Lecture, 35% Discussion.
Grading: 25% special projects, 60% quizzes, 15% other evaluation. Class attendance.
Exam Format: The two quizzes will be multiple choice, short answer and choice of short essay.

APEC 1101 Principles of Microeconomics
4 credit(s); Credit will not be granted if credit has been received for: ECON 1101; Meets CLE req of Global Perspectives; meets CLE req of Social Sciences;
Instructor: Okediji, Tade O
Description: Student may contact the instructor or department for information.

APEC 1101 Principles of Microeconomics
4 credit(s); Credit will not be granted if credit has been received for: ECON 1101; Meets CLE req of Global Perspectives; meets CLE req of Social Sciences;
Instructor: Okediji, Tade O
Description: Student may contact the instructor or department for information.

APEC 1101H Principles of Microeconomics
A-F only, 4 credit(s); prereq Honors student, proficiency in high school algebra; Credit will not be granted if credit has been received for: APEC 1101; Meets CLE req of Global Perspectives; meets CLE req of Social Sciences;
Instructor: Liu, Donald J.
Description: Student may contact the instructor or department for information.

APEC 1251 Principles of Accounting
3 credit(s); prereq 30 cr; not recommended for premajors in Ag Food Bus Mgmt; Credit will not be granted if credit has been received for: ACCT 2050;
Instructor: Nefstead, Ward Elliot
Description: Student may contact the instructor or department for information.

APEC 1251 Principles of Accounting
3 credit(s); prereq 30 cr; not recommended for premajors in Ag Food Bus Mgmt; Credit will not be granted if credit has been received for: ACCT 2050;
Instructor: Nefstead, Ward Elliot
Description: Fundamentals of business accounting; basic finance concepts; use of accounting data for income tax and managerial decision making. The following student learning objectives are included: 1) the student will be able to demonstrate an understanding of accounting from a user/consumer point of view; 2) the student will be able to perform the basic activities associated with accounting; 3) the student will be able to describe and contrast various accounting systems; 4) the student will be able to demonstrate proficiency in the analysis/interpretation of financial statements; 5) the student will be able to demonstrate the ability to work with actual case studies or analyze the relevance of accounting.
Style: 60% Lecture, 20% Discussion, 20% Laboratory.
Grading: 40% midterm exam, 20% final exam, 20% special projects, 20% class participation.
Exam Format: Multiple choice.

APEC 1905 Topics: Freshman Seminar: The Ordinary Business of Life
A-F only, 2 credit(s), max credits 3, 1 completion allowed;
prereq Fr.;
Instructor: Cooper, Gary M
Description: The world of economics is sometimes referred to as the study of the ordinary business of life. In this course we will discover, reflect on, and teach ourselves about a selected group of topics in the fields of business management and economics. The seminar is "chunked out" into four unique parts. While the first quarter of our meetings will be on business and economic history to provide context (the "Economic Revolution", the Federal Reserve System, and the role of government in the economy), the second quarter of class will analyze "macro" issues related to the domestic and world economies (economic growth, the New Economy, and globalization). The third and fourth quarters of our time together will be "micro" related. We will explore the economics of information, read and solve The Fatal Equilibrium, a mystery novel that highlights several basic economic principles. As part of this class, we will investigate the fields of leadership and business ethics through a series of readings and films. Given the instructor's experience in enrollment management and academic advising, parts of class discussions throughout the term will be dedicated to helping you make your transition to and navigation of the University a smooth one.
Style: 25% Lecture, 25% Film/Video, 50% Discussion. There will be one Saturday afternoon field trip.
Grading: 25% reports/papers, 30% quizzes, 20% class participation, 25% problem solving.
Exam Format: Multiple choice, short answer, and mini essay.

APEC 3001 Applied Microeconomics: Consumers, Producers, and Markets
4 credit(s); prereq [[1101 or ECON 1101 or 1101H] or ECON 1101H], [MATH 1142 or MATH 1271] or instr consent; intended for undergrads in [Ag/Food Bus Mgmt, Appl Econ]; Credit will not be granted if credit has been received for: ECON 3101;
Instructor: Huang, Quiqiong
Description: Microeconomics studies rational choices under scarcity. This course develops the basic concepts and framework for microeconomic analysis and applies it to analyzing practical economic problems with an emphasis on government policies. Topics include: basic supply and demand analysis that examines how changes in market conditions and policies affect market equilibrium price and quantity, how consumers/buyers/individuals make choices to maximize their well-being given their limited income, derive demand curve from decision-making of consumers, how producers/sellers/firms make choices to maximize their profits given their limited budget and technology, derive supply curve from production decisions of producers, welfare analysis, and market structure including perfect competition and imperfect competition (monopoly). This course is the first in a sequence with APEC 3002 (Managerial Economics).
Style: 90% Lecture, 5% Small Group Activities, 5% Student Presentation.
APEC 3002 Applied Microeconomics: Managerial Economics
4 credit(s); prereq [[3001 or ECON 3101], [OMS 2550 or STAT 3011]] or instr consent;
Instructor: Apland, Jeffrey
Description: This course focuses on the application of microeconomic theory to managerial problems. Lectures, readings, problem sets, lab sessions, case studies, and discussions integrate theory and applications. Topics include: an introduction to regression analysis, demand analysis and demand function estimation, cost analysis and cost function estimation, resource allocation decisions, linear programming, market structure, pricing policy, risk analysis, and capital budgeting. This course is the second in a sequence that begins with ApEc 3001. Consumers and Markets.
Style: 50% Lecture, 10% Discussion, 40% Laboratory.
Grading: 40% mid exam, 20% final exam, 40% other evaluation.
Exams and problem set assignments

APEC 3006 Applied Macroeconomics: Government and the Economy
3 credit(s); prereq [[1102 or Econ 1102], [3001 or Econ 3101]] or instr consent; Credit will not be granted if credit has been received for: ECON 3102;
Instructor: Mc Cullough, Gerard John
Description: Student may contact the instructor or department for information.

APEC 3007 Applied Macroeconomics: Policy, Trade, and Development
3 credit(s); prereq [1101 or ECON 1101], [1101H or ECON 1101H], [1102 or ECON 1102], [1102H or ECON 1102H]; 3001, 3006 recommended; Meets CLE req of Global Perspectives;
Instructor: Pardey, Philip Gordon
Description: This is an undergraduate course in trade and economic development addressed in five main parts. Part I lays out what we know about the state of economic development worldwide and international trade: including indicators of economic development, how trade has grown over recent centuries, and concerns over globalization and the welfare of developing countries. Part II develops the concept of comparative advantage and the technological basis for trade and the gains from trade. The concepts of productivity, technical change, and the role of research and development will be identified and discussed. Part III of the course will discuss trade policy instruments such as tariffs, subsidies, and trade preferences along with the trade related institutions that make trade and development happen. Part IV revisits the basis for trade, identifying the role of resource endowments. The trade models considered here go beyond identifying the gains from trade to reveal the income distribution consequences of trade. Part V includes a selection of trade-related topics, some of which may be considered in class if time permits. Topics listed include the international movement of capital and labor (i.e., factor mobility), intellectual property and trade regulation, economies of scale and imperfect competition, and trade policies in developing countries.
Style: 80% Lecture, 20% Discussion.
Grading: 35% final exam, 30% reports/papers, 35% quizzes.
Exams and problem set assignments

APEC 3071 Agriculture and Economic Growth in Developing Countries
3 credit(s); prereq 1101, 1102, Econ 1101, 1102 or instr consent;
Instructor: Senauer, Benjamin H
Description: This course will cover a range of topics on economic development of low-income countries, with a particular focus on the role of agriculture. The course assumes some familiarity with basic microeconomics. Topics to be covered include agricultural issues in developing countries, hunger, population growth, impacts on the environment and the role of policy, as well as others. A major paper on a topic chosen by the students is required.
Style: 40% Lecture, 40% Discussion. Student presentations in class.
Grading: 50% mid exam, 25% reports/papers, 10% quizzes, 5% in-class presentation, 10% class participation.
Exam Format: Multiple choice and essay

APEC 3411 Commodity Marketing
3 credit(s); prereq 1101 or Econ 1101;
Instructor: Buhr, Brian L
Description: This course exposes the student to the economic concepts related to marketing agricultural commodities. The course examines the conditions of competitive markets, historical perspectives on market institutions and policy, structural characteristics of agricultural commodity sectors, and policies and regulations affecting agricultural marketing of livestock, crop and dairy products. It is intended to serve as a precursor to ApEc 4481: Futures and Options Markets. A key component of the course is learning concepts of price and market analysis. Students will collect data and analyze price changes for a chosen commodity. These tools are commonly used by commodity traders, commodity policy analysis and economists in general.
Style: 80% Lecture, 20% Discussion.
Grading: 20% mid exam, 30% final exam, 20% reports/papers, 10% class participation, 20% problem solving.
Exam Format: Multiple Choice, True/False and short problem solving and answer

APEC 3501 Agribusiness Finance
3 credit(s); prereq [[1251 or Acct 2050], 60 cr] or instr consent; Credit will not be granted if credit has been received for: FINA 3001;
Instructor: Pederson, Glenn Darwin
Description: This course covers an introduction to business finance and the role of financial markets in agribusiness. It introduces students to the financial structure of agribusiness firms; evaluation of capital investment projects, selection of financial structure, risk management, and introduction to financial markets and instruments. Teaching is primarily accomplished through lecture, class discussion, problem solving exercises, and case problems. Text and lecture notes are the primary reference materials. A standard introductory business finance text is used.
Style: 60% Lecture, 35% Discussion, 5% Laboratory.
Grading: 20% mid exam, 30% final exam, 30% quizzes, 20% other evaluation. Decision cases
Exam Format: Multiple choice, problems, and essays.

APEC 3991 Independent Study in Applied Economics
1-4 credit(s), max credits 4, 1 completion allowed; prereq instr consent;
Instructor: STAFF
Description: Independent study and supervised reading and research on subjects and problems not covered in regularly offered courses. Coursework varies by instructor. No exams usually given.

APEC 4096 Professional Experience Program: Internship
S-N only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq CFANS undergrad, instr consent, completed internship contract;
Instructor: STAFF
Description: Professional experience in agribusiness firms or government agencies gained through supervised practical experience; evaluative reports and consultations with faculty advisors and employers.

APEC 4451W Food Marketing Economics
3 credit(s); prereq [[1101 or Econ 1101], [1101H or Econ 1101H], MKTG 3001, 60 cr] or instr consent; Credit will not be granted if credit has been received for: APEC 5451; Meets CLE req of Civic Life and Ethics; meets CLE req of Writing Intensive;
Instructor: Senauer, Benjamin H
Description: The course covers the development of a marketing plan/strategy for food products, including developing a target market based on consumer trends and segmentation. The food industry at the retail (foodstore and foodservice) and wholesale levels, plus supply chain management are studied, including the impact of e-commerce both at the consumer and business levels. Current ethical and public policy issues confronting the food industry are examined and considered from various perspectives. Students pursue individual and group projects. Three special projects account for 50% of the grade. They require written reports of about 5 pages and class presentations. The first involves developing a marketing plan for a food product and the second a case study of a marketing decision by a local food business. The last project involves a debate of food and nutrition policy issues by the class. There are several industry speakers. The course fulfills both writing intensive and citizenship and public ethics requirements.

Style: 50% Lecture, 25% Discussion. Presentations and debates
Grading: 40% reports/papers, 10% in-class presentation, 10% class participation, 40% other evaluation. Exams
Exam Format: Essay, short answer

APEC 4461 Horticultural Marketing
A-F only, 3 credit(s); prereq 1101 or ECON 1101; Credit will not be granted if credit has been received for: HORT 4461;
Instructor: Yue, Chengyan
Description: This course examines several major areas in horticultural marketing. First, we will introduce the difference between horticultural products and commercial commodities and what’s special about horticultural marketing; Second, we analyze the functions performed by the horticultural marketing system. We analyze the marketing behavior of horticultural businesses (farms, wholesalers, garden centers) and cover the core marketing components that should be used by every small horticultural business; Finally, the basic approaches of consumer research (survey techniques, and non-hypothetical experimental approaches, etc.) will be introduced. The recommended textbook is Solomon, Michael R. and Elnora Stuart. 2003. Marketing: Real People, Real Choices, 3rd Ed. This course will consist of lectures, discussions, and student projects and presentations. Students will work on the projects in small group teams of three or four. The target audience is undergraduate students and master of agriculture students.

Style: 60% Lecture, 40% Discussion.
Grading: 30% mid exam, 20% final exam, 15% reports/papers, 10% quizzes, 20% in-class presentation, 5% class participation.
Exam Format: Multiple choice and short answer questions.

APEC 5031 Methods of Economic Data Analysis
3 credit(s); prereq Math 1271, Stat 5021, knowledge of matrix algebra;
Instructor: Beatty, Timothy KM
Description: Student may contact the instructor or department for information.

APEC 5151 Applied Microeconomics: Firm and Household
3 credit(s); prereq 3001 or Math 1271 or Math 2243 or equiv or grad student or instr consent;
Instructor: Coggins, Jay Steven
Description: Quantitative techniques for analysis of economic problems of firm and household. Links between quantitative tools and economic analysis developed to understand economic theory and develop research skills. Quantitative tools include regression analysis and mathematical programming.

Style: 70% Lecture, 15% Discussion, 15% Laboratory.
Grading: 15% mid exam, 45% final exam, 40% problem solving.
Exam Format: Essay/problems

APEC 5451 Food Marketing Economics
A-F only, 3 credit(s); prereq grad student; Credit will not be granted if credit has been received for: APEC 4451W;
Instructor: Senauer, Benjamin H
Description: The course covers the development of a marketing plan/strategy for food products, including developing a target market based on consumer trends and segmentation. The food industry at the retail (foodstore and foodservice) and wholesale levels, plus supply chain management are studied, including the impact of e-commerce both at the consumer and business levels. Current ethical and public policy issues confronting the food industry are examined and considered from various perspectives. Students pursue individual and group projects. Three special projects account for 50% of the grade. They require written reports of about 5 pages and class presentations. The first involves developing a marketing plan for a food product and the second a case study of a marketing decision by a local food business. The last project involves a debate of food and nutrition policy issues by the class. There are several industry speakers. The course fulfills both writing intensive and citizenship and public ethics requirements.

Style: 50% Lecture, 25% Discussion. Presentations and debates
Grading: 40% reports/papers, 10% in-class presentation, 10% class participation, 40% other evaluation. Exams
Exam Format: Essay, short answer
APEC 8202 Mathematical Optimization in Applied Economics
3 credit(s); prereq [5151, Econ 5151] or equiv or instr consent;
Instructor: Apland, Jeffrey
Description: Student may contact the instructor or department for information.

APEC 8205 Applied Game Theory
3 credit(s); prereq [8101, 8102, 8103, 8104] or [Econ 8001, Econ 8002, Econ 8003, 8004] or instr consent;
Instructor: Hurley, Terry
Description: Student may contact the instructor or department for information.

APEC 8211 Econometric Analysis I
4 credit(s); prereq [[Stat 4102 or Stat 5102], Ph.D. student] or instr consent;
Instructor: McCullough, Gerard John
Description: This is the first half of a two semester introduction to applied econometrics. One aim is to introduce students to the use of econometric techniques, including the basic methods of classical regression analysis and inference, as well as some methods commonly used when the classical regression model is not appropriate. A second objective is to present students with sufficient econometric theory to thoroughly understand the techniques they are using, and to prepare them for the second semester. The approach is ?hands-on?. Students will be expected to analyze a number of economic data sets with programs that they write using MATLAB?. Lectures will focus on econometric techniques and theory. Basics of MATLAB programming are covered in section.
Style: 60% Lecture, 20% Discussion, 20% Small Group Activities.
Grading: 30% mid exam, 50% final exam, 20% written homework.

APEC 8602 Economics of the Environment
3 credit(s); prereq Econ 8004 or Econ 8104 or instr consent;
Instructor: Coggins, Jay Steven
Description: Student may contact the instructor or department for information.

APEC 8703 Microeconomic Analysis of Economic Development
A-F only, 3 credit(s); prereq Econ 8001-04 or Econ 8101-04, and ApEc 8211-8212 or instr consent. Concurrent registration is ok.;
Instructor: Glewwe, Paul W
Description: Student may contact the instructor or department for information.

APEC 8802 Financial Economics
A-F only, 2 credit(s); prereq [8211, Econ 5151] or [Econ 8001, Econ 8002] or instr consent;
Instructor: Pederson, Glenn Darwin
Description: Student may contact the instructor or department for information.

APEC 8803 Marketing Economics
A-F only, 2 credit(s); prereq [Econ 8001, Econ 8002] or [Econ 8101, Econ 8102] or instr consent;
Instructor: Liu, Donald J.
Description: Student may contact the instructor or department for information.

APEC 8902 Graduate Seminar: Ph.D. Program
S-N only, 1 credit(s); prereq Agri/ApEc PhD student or ApEc PhD student;
Instructor: Homans, Frances Reed
Description: Student may contact the instructor or department for information.

APEC 8991 Advanced Topics in Applied Economics: Public Finance
3 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Kalambokidis, Laura TJ
Description: Student may contact the instructor or department for information.

Applied Professional Studies
20 Classroom Office Building

APS 5201 Career and Job Search Preparation for Graduate Students
S-N only, 1 credit(s); prereq consent;
Instructor: Kubak, Maggie
Description: Student may contact the instructor or department for information.

APS 8002 Final Project Seminar/Capstone
S-N only, 1-6 credit(s), max credits 6, 1 completion allowed; prereq consent;
Instructor: Schottel, Janet L
Description: Student may contact the instructor or department for information.

APS 8110 Graduate Seminar Series
S-N only, 1 credit(s), max credits 10, 10 completions allowed; prereq consent;
Instructor: Schottel, Janet L
Description: Student may contact the instructor or department for information.

Arabic
136 Klaeber Court

ARAB 1101 Beginning Arabic I
5 credit(s); Credit will not be granted if credit has been received for: ARAB 4101;
Instructor: Khalek, Hisham A
Description: Arabic 1101 is the first in a sequence of courses aimed at reading, speaking, listening, and writing formal Arabic, also known as Modern Standard Arabic. The class begins with learning the alphabet; pronunciation, reading, and writing, and proceeds into learning basic communicative interactions. The course also introduces students to the cultures of the Arabic-speaking people. The target audience includes undergraduate as well as graduate students. The texts used are Assalamu Alaykum series by Hisham Khalek.
Style: 40% Lecture, 10% Film/Video, 20% Discussion, 10% Laboratory, 20% Small Group Activities. Culture
Grading: 25% final exam, 10% quizzes, 15% written homework, 35% additional semester exams, 5% attendance, 10% laboratory evaluation.
Exam Format: Vocab knowledge/ill in the blank. Reading Comprehension, Listening comprehension.

ARAB 3101 Intermediate Arabic I
5 credit(s); prereq 1102 or equiv or instr consent;
Instructor: Khalek, Hisham A
Description: Student may contact the instructor or department for information.

ARAB 3390 Arabic Language Teaching Tutorial
S-N only, 1 credit(s), max credits 2; prereq Grade of A in 3102/4122;
Instructor: Khalek, Hisham A
Description: Student may contact the instructor or department for information.

ARAB 4101 Beginning Arabic I
ARCH 1701 The Designed Environment
A-F only, 3 credit(s); prerequisite: ARCH 1101; credit will not be granted if credit has been received for: ARCH 1101;
Instructor: Khalek, Hisham A
Description: Architectural 1101 is the first in a sequence of courses aimed at reading, speaking, listening, and writing formal Arabic, also known as Modern Standard Arabic. The class begins with learning the alphabet; pronunciation, reading, and writing, and proceeds into learning basic communicative interactions. The course also introduces students to the cultures of the Arabic-speaking people. The target audience includes undergraduate and graduate students. The texts used are Assalamu Alaykum series by Hisham Khalek.
Style: 40% Lecture, 10% Film/Video, 20% Discussion, 10% Laboratory, 20% Small Group Activities. Culture
Grading: 25% final exam, 10% quizzes, 15% written homework, 35% additional semester exams, 5% attendance, 10% laboratory evaluation.
Exam Format: Vocab knowledge/fill in the blank. Reading Comprehension, Listening comprehension.

ARCH 3250 Design Workshop
A-F only, 1-6 credit(s), max credits 12, 6 completions allowed; prerequisite: ARCH 2281; credit will not be granted if credit has been received for: ARCH 2281;
Instructor: STAFF
Description: Student may contact the instructor or department for information.
Style: 10% Lecture, 20% Discussion, drawing exercises
Grading: 20% class participation, 60% three graded reviews; 20% final assignment
Exam Format: review of drawings

ARCH 3301 Drawing for Design in Architecture
A-F only, 3 credit(s); prerequisite: [ARCH 1301 or LA 1301 or 2301], [Arch or BED major];
Instructor: STAFF
Description: This is a follow-up course for ARCH 1301. It is intended to explore ways of seeing and ways of exploring concepts behind objects, buildings, and places. These explorations will include: historical and theoretical aspects of depicting architecture that may be found in paintings and architectural drawings; concepts of structure and order of form; conventional and experimental strategies for depicting space, light, and "time" (i.e. projection systems, multiple, and sequential drawings); pencil, pastels, and ink drawing techniques and skills. Though nothing will be "designed" in this course, the educational objective of this sequence of exercises is to introduce issues and develop skills which are essential for a design studio. Note: Requirements may vary depending on the instructor who teaches a particular section.
Style: 10% Lecture, 20% Discussion, drawing exercises
Grading: 25% class participation, 50% final portfolio; 25% final assignment
Exam Format: review of drawings

ARCH 3351 AutoCAD I
3 credit(s); prerequisite: ARCH major or BED major or instr consent; credit will not be granted if credit has been received for: ARCH 3351;
Instructor: Anderson, Kristine
Description: Basic concepts, tools, and techniques of computer-aided design with current AutoCAD Release. Strategies and techniques for producing dimensioned and annotated drawings suitable for plotting, and an introduction to 3-D drawing capabilities. Use of dimension variables, attributes, blocks, and symbols
 Exam Format: review of drawings
Design
A-F only, 3 credit(s); prereq Architect major or BED major or
instr consent;
Instructor: Dozier, James
Description: Student may contact the instructor or department
for information.

ARCH 3411V Architectural History to 1750
A-F only, 3 credit(s); prereq Soph or above; Meets CLE req
of Global Perspectives; meets CLE req of Historical
Perspectives; meets CLE req of Writing Intensive;
Instructor: Satkowski, Leon
Description: Student may contact the instructor or department
for information.

ARCH 3411W Architectural History to 1750
A-F only, 3 credit(s); prereq Soph or above; Meets CLE req
of Global Perspectives; meets CLE req of Historical
Perspectives; meets CLE req of Writing Intensive;
Instructor: Satkowski, Leon
Description: This course investigates architecture broadly
considered from Egypt to the early 18th century in Europe and
the New World. The basic tenet of the course is the study of our
constructed environment--buildings, cities, landscapes. Although
the course focuses on western architecture, approximately one
third of the lectures are devoted to China, Japan, and the Indian
subcontinent. Weekly recitations will both augment lectures and
introduce students to looking at the built environment in the Twin
Cities area. The course is aimed at students planning
undergraduate majors in architecture, landscape architecture, art
history, and anyone with an interest in the visual arts. Required
books will include Moffett et al. on the period as a whole, Mac
Donald on the Pantheon, and O’Gorman on an introduction to
analyzing buildings.
Style: 66% Lecture, 33% Discussion.
Grading: 30% mid exam, 30% final exam, 20% reports/papers,
20% quizzes.
Exam Format: Essay, slide ID

ARCH 3641 Introduction to Heritage Preservation
A-F only, 3 credit(s); prereq Jr or Sr only;
Instructor: Donofrio, Gregory
Description: This class explores the potential of, and challenges
to, heritage preservation in the United States. As a growing
social movement and interdisciplinary field, heritage
preservation’s concepts and tools are now widely utilized by
architects, planners, and other allied professionals and public
advocates. Preservation is widely acknowledged to produce
public benefits that include promotion of local, state, and national
history; redevelopment of architecturally significant properties;
cultural conservation of landscapes; and stimulation of
community economic development. And yet there are some who
question if preservation’s “benefits” are socially equitable, or if it
is really just gentrification in disguise. Preservation may also
have important environmental benefits as one of the
best-practices for architectural sustainability. Isn’t the building
that already exists the greenest one of all? Students will critically
evaluate preservation’s pros and cons from a number of different
disciplinary perspectives through lectures, readings, films, class discussions,
assignments, and local field trips, drawing on case studies
located in the Twin Cities, as well as New Orleans, Seattle,
Bostom, and New York City. Student Learning Outcomes: In this
course, the student will be able to: * Know the history of
the preservation movement in the United States and the broader
historical context in which it developed. * Understand changes
that have taken place over time in the objectives, theories, and
methods of the historic preservation movement. * Learn
central contemporary preservation terms, practices, and laws. * Critically
evaluate and debate current preservation norms, objectives, and
policies through written assignments and class discussions. * Independently frame and research a final paper on a
preservation-related topic, making use of both primary and
secondary source materials.

ARCH 3711V Honors: Environmental Design and the
Sociocultural Context
A-F only, 3 credit(s); prereq Honors, [soph or above]; Meets
CLE req of Writing Intensive;
Instructor: Robinson, Julia Williams
Description: Environmental Design and the Sociocultural
Context addresses how the built environment affects people in
their everyday life and how cultural perspectives affect the way
environments are constructed. Students examine the
responsibility of the design professional to the human community
and its shared environment?global, local, political and ethnic.
Additionally the course develops skills in studying written texts,
as well as environments and professional institutions from a
cultural perspective. As it is a writing intensive class, students
will learn to write essays that identify important issues, take a
position and make an argument using evidence. By the end of
the semester the participating student is expected to be able to:
Employ critical thinking skills founded in a cultural approach.
Identify your own cultural position as reflected in ethnicity, race,
religion and gender. Develop an understanding of your cultural
bias as well as develop empathy with other perspectives
Construct sound arguments with a clear statement, a
development using evidence, and a conclusion. * Read? places
within our culture Understand the attitudes and institutions
places represent. Apprehend the various frames of reference of
a place (e.g. aesthetic, economic, political, moral). Perceive how
our bodies, everyday activities, and culture shape and are
shaped by places. Realize that places exist in moments and
currents of time. Apply specific methods and tools that enable
the description, analysis and interpretation of places. Understand
the role of a professional in support of society?’s welfare.
Examine the design professions from the perspective of active
citizenship.

ARCH 3711W Environmental Design and the Sociocultural
Context
A-F only, 3 credit(s); prereq Soph or above; Meets CLE req
of Writing Intensive;
Instructor: Robinson, Julia Williams
Description: Environmental Design and the Sociocultural
Context addresses how the built environment affects people in
their everyday life and how cultural perspectives affect the way
environments are constructed. Students examine the
responsibility of the design professional to the human community
and its shared environment?global, local, political and ethnic.
Additionally the course develops skills in studying written texts,
as well as environments and professional institutions from a
cultural perspective. As it is a writing intensive class, students
will learn to write essays that identify important issues, take a
position and make an argument using evidence. By the end of
the semester the participating student is expected to be able to:
Employ critical thinking skills founded in a cultural approach.
Identify your own cultural position as reflected in ethnicity, race,
religion and gender. Develop an understanding of your cultural
bias as well as develop empathy with other perspectives
Construct sound arguments with a clear statement, a
development using evidence, and a conclusion. * Read? places
within our culture Understand the attitudes and institutions
places represent. Apprehend the various frames of reference of
a place (e.g. aesthetic, economic, political, moral). Perceive how
our bodies, everyday activities, and culture shape and are
shaped by places. Realize that places exist in moments and
currents of time. Apply specific methods and tools that enable
the description, analysis and interpretation of places. Understand
the role of a professional in support of society?’s welfare.
Examine the design professions from the perspective of active
citizenship.

ARCH 4150 Topics in Architecture: Whole Building Analysis
A-F only, 3 credit(s), max credits 24, 6 completions allowed;
prereq Arch major or instr consent;
Instructor: Abraham, Loren E
Description: Student may contact the instructor or department
for information.

ARCH 4150 Topics in Architecture
A-F only, 3 credit(s), max credits 24, 6 completions allowed;
prereq Arch major or instr consent;
Instructor: Miller, Nancy A  
Description: Student may contact the instructor or department for information.

ARCH 4150 Topics in Architecture: World Heritage Conservation  
A-F only, 3 credit(s), max credits 24, 6 completions allowed;  
prereq Arch major or instr consent;  
Instructor: Chen, Arthur Hui-Min  
Description: Student may contact the instructor or department for information.

ARCH 4150 Topics in Architecture: American Housing, Histories and Cultures  
A-F only, 3 credit(s), max credits 24, 6 completions allowed;  
prereq Arch major or instr consent;  
Instructor: Solomonson, Katherine Mary  
Description: Student may contact the instructor or department for information.

ARCH 4150 Topics in Architecture: The Aesthetic in an Anti-Aesthetic Culture  
A-F only, 3 credit(s), max credits 24, 6 completions allowed;  
prereq Arch major or instr consent;  
Instructor: Bhatt, Ritu  
Description: Student may contact the instructor or department for information.

ARCH 4321 Architecture in Watercolor  
A-F only, 3 credit(s); prereq 1301; Credit will not be granted if credit has been received for: ARCH 5321;  
Instructor: Fogg, Monica  
Description: Watercolor as a tool in design process. Foundation principles, techniques, medium, tools, materials. Color relationships, mixing, composition, applications to design.

ARCH 4361 3-D Computer Architectural Modeling and Design  
A-F only, 3 credit(s); prereq 3351, Arch major; Credit will not be granted if credit has been received for: ARCH 5361;  
Instructor: Dozier, James  
Description: This class explores the use of 3-D computer modeling as a tool for representation in both abstract and realistic ways. Students will gain a good basic working knowledge of computer modeling software through assignments that include the creation and arrangement of objects, setting up lighting, developing surface materials, and creating still renderings and animations. The class also explores ways in which computer visualization can be used throughout the design process for: design exploration, feedback during the development of design ideas, and realistic representation of fully formed designs.

ARCH 4424 Renaissance Architecture  
A-F only, 3 credit(s); prereq 3411 or instr consent; Credit will not be granted if credit has been received for: ARCH 5424;  
Instructor: Satkowski, Leon  
Description: Student may contact the instructor or department for information.

ARCH 4432 Modern Architecture  
A-F only, 3 credit(s); prereq 3412 or instr consent; Credit will not be granted if credit has been received for: ARCH 5432;  
Instructor: Miller, Nancy A  
Description: Arch 4432 will investigate the history of modern architecture—from design, socio-cultural, technological, political, and other historical perspectives—and will cover the period of approximately 1840 to 1940. The topic will be examined through four themes: Work, City, Home and Leisure. Presentation of lectures, films and other media will be complemented with in-class discussion sessions. Discussions will be focused on the course readings and topics, which will be selected from primary sources (i.e. historic newspaper and journal articles, architect manifestos, advertisements, trade pamphlets and the like) and secondary sources (i.e. contemporary journal articles and book chapters that critically analyze historical events). As much as possible, readings will be culled from journals accessible online, via the UMN Library website. However, some readings will be collected into a course packet, which will be available for purchase in the UMN Bookstore at the start of fall semester. For comparison, whereas Arch 3412 looks at a broad cross-section of modern architecture, Arch 4432 will examine fewer topics in greater depth. Some buildings and architects will overlap; others will be new to you. In all cases, the course content of Arch 4432 will build on the base of knowledge you developed in Arch 3412. Students who have not taken Arch 3412 may contact the instructor for course permission.

Style: 50% Lecture, 15% Film/Video, 20% Discussion, 15% Small Group Activities. *Class time percentages are approximate* Lectures will be accompanied by thoughtfully selected films/video and other media. Class will break into reading discussion groups for on several days.

Grading: 20% mid exam, 20% final exam, 20% reports/papers, 30% special projects, 10% class participation.

ARCH 4511 Materials and Methods I  
A-F only, 3 credit(s); prereq BS Arch major;  
Instructor: Lutz, James Martin  
Description: Student may contact the instructor or department for information.

ARCH 4571 Architectural Structures I  
A-F only, 3 credit(s); prereq BS Arch major;  
Instructor: Srothman, Susan C  

ARCH 4671 Historic Preservation  
A-F only, 3 credit(s); prereq Jr or sr or instr consent;  
Instructor: Donofrio, Gregory  
Description: Student may contact the instructor or department for information.

ARCH 4701W Introduction to Urban Form and Theory  
A-F only, 3 credit(s); prereq [3411, 3412] or instr consent; Meets CLE req of Writing Intensive;  
Instructor: Jara, Cynthia  
Description: Cities have to be made - thought about, desired, planned, engineered, built, lived in, and maintained. Throughout this process cities acquire layers of history, not just architectural history and the history of formal changes and development, but political, military, economic, and cultural history. Arch 4701, Introduction to Urban Form, grapples with these concepts and attempts to lay a foundation for ordering and understanding them.

ARCH 4731 Territorial City  
A-F only, 3 credit(s); prereq instr consent;  
Instructor: Conway, William F  
Description: Student may contact the instructor or department for information.

ARCH 5321 Architecture in Watercolor  
A-F only, 3 credit(s); prereq M Arch grad student or instr consent; Credit will not be granted if credit has been received for: ARCH 4321;  
Instructor: Fogg, Monica  
Description: Student may contact the instructor or department for information.

ARCH 5361 3-D Computer Architectural Modeling and Design  
A-F only, 3 credit(s); prereq M Arch major; Credit will not be granted if credit has been received for: ARCH 4361;  
Instructor: Dozier, James  
Description: The class explores the use of 3D computer modeling as a tool for representation in both abstract and
realistic ways. Participants will gain a good working knowledge of computer modeling software through assignments that include the creation, manipulation and arrangement of three-dimensional forms during the design of abstract environments, use of lighting as a design element, and development of surface materials as an integral part of a fully formed design. In addition the class explores ways in which computer visualization can be used throughout the design process - for design exploration, for feedback during the development of design ideas, and for realistic representation of fully formed designs. Assignments include still renderings and animations, along with research and writing components. The major assignment in this course entails creation of a detailed building model and animation which explores and presents a significant work of architecture.

ARCH 5361 3-D Computer Architectural Modeling and Design
A-F only, 3 credit(s); prereq M Arch major; Credit will not be granted if credit has been received for: ARCH 4361 ;
Instructor: Dozier, James
Description: Student may contact the instructor or department for information.

ARCH 5381 Introduction to Computer Aided Architectural Design
A-F only, 3 credit(s); prereq Arch or BED or M Arch or grad student in LA or instr consent ;
Instructor: Dozier, James
Description: Student may contact the instructor or department for information.

ARCH 5410 Topics in Architectural History
A-F only, 3 credit(s), max credits 12, 4 completions allowed; prereq MS Arch or M Arch major or instr consent ;
Instructor: Miller, Nancy A
Description: Student may contact the instructor or department for information.

ARCH 5410 Topics in Architectural History: American Housing, Histories and Cultures
A-F only, 3 credit(s), max credits 12, 4 completions allowed; prereq MS Arch or M Arch major or instr consent ;
Instructor: Solomonson, Katherine Mary
Description: Student may contact the instructor or department for information.

ARCH 5411 Principles of Design Theory
A-F only, 3 credit(s); prereq M Arch major or instr consent ;
Instructor: Fisher, Thomas Ray
Description: Student may contact the instructor or department for information.

ARCH 5424 Renaissance Architecture
A-F only, 3 credit(s); prereq MS Arch or M Arch major or instr consent ; Credit will not be granted if credit has been received for: ARCH 4424 ;
Instructor: Satkowski, Leon
Description: The course addresses architecture in Italy from 1400 to 1600. It focuses on the works of individual architects (Brunelleschi, Alberti, Bramante, Michelangelo, Palladio), the development of specific building types (palaces, villas, longitudinal and centrally-planned churches), urban elements (squares and streets, fortifications), and the evolution of major cities (Florence, Rome, Venice). Two exams and a major research paper.

ARCH 5515 Technology One: Building Materials and Construction Systems
A-F only, 3 credit(s); prereq M Arch student;
Instructor: Roe, Sharon Louise
Description: Student may contact the instructor or department for information.

ARCH 5517 Technology Three: Structural Systems
A-F only, 3 credit(s); prereq M Arch student;
Instructor: Ibarra Sevilla, Benjamin
Description: Student may contact the instructor or department for information.

ARCH 5550 Topics in Technology: Whole Building Analysis
A-F only, 3 credit(s), max credits 12, 3 completions allowed; prereq M.Arch major;
Instructor: Abraham, Loren E
Description: Student may contact the instructor or department for information.

ARCH 5550 Topics in Technology: Traits & Form Performance
A-F only, 3 credit(s), max credits 12, 3 completions allowed; prereq M.Arch major;
Instructor: Ibarra Sevilla, Benjamin
Description: Student may contact the instructor or department for information.

ARCH 5621 Professional Practice in Architecture
A-F only, 3 credit(s); prereq M Arch major or instr consent ;
Instructor: Cheng, Renee
Description: Student may contact the instructor or department for information.

ARCH 5670 Topics in Historic Preservation: World Heritage Conservation
3 credit(s), max credits 12, 4 completions allowed; prereq MS Arch or M Arch major or instr consent ;
Instructor: Chen, Arthur Hui-Min
Description: This course provides a global understanding of World Heritage, the nomination and management of sites, and design issues affiliated with historic preservation designation. Students should gain an understanding of design issues as they relate to historic properties, including sensitive alteration, adaptation of and additions to existing buildings. Case-studies link current practices, methods and solutions with expert preservationists, site conservationists and local communities in the cultural development and design of preservation proposals.

ARCH 5670 Topics in Historic Preservation: Economics of Heritage Preservation
3 credit(s), max credits 12, 4 completions allowed; prereq MS Arch or M Arch major or instr consent ;
Instructor: Donofrio, Gregory
Description: This introductory course will provide, through readings and lectures, an overview of the theory and practice of heritage preservation-based community redevelopment and economics. Students will learn about financial aspects of real estate development (including economic incentives and constraints) by developing case studies of recent historic rehabilitation projects throughout Minnesota in which they examine details such as financial feasibility and compliance with design guidelines and other regulatory aspects often encountered in the adaptive reuse of historic properties. They will also consider financial incentives available in other states in an effort to understand how new policies in Minnesota might positively influence preservation activity.

ARCH 5671 Historic Preservation
3 credit(s); prereq 3412 or instr consent ;
Instructor: Donofrio, Gregory
Description: Student may contact the instructor or department for information.

ARCH 5731 Territorial City
A-F only, 3 credit(s);
Instructor: Conway, William F
Description: Student may contact the instructor or department for information.

ARCH 8561 Sustainable Design Theory and Practice
A-F only, 3 credit(s); prereq [5513, [grad MS or MArch]] or instr consent ;
Instructor: Guzowski, Mary M
Description: Architectural design can have a profound influence on the human capacity to create a more sustainable future. This course investigates the theory and practice of sustainable design processes and methods with an emphasis on contemporary and
emerging approaches to sustainable architecture. The seminar provides students an opportunity to study sustainable design theory inside and outside the design disciplines and to explore how they influence practice and inform design thinking. The class will provide an overview of sustainable design through readings, local field studies, case study research, and class discussions. Students will develop an understanding of the emerging theories of sustainability and how they connect directly to everyday practice. We will explore how the environment, economy, and equity interact to inform sustainable design thinking and practice. The goals of the course are to provide: Knowledge of ecological design theories and practices that shape sustainable design; Framework, context, and tools for evaluating sustainable design theory and practice; Lessons from exemplary precedents and hands-on experience of sustainable design through fieldwork; An opportunity for students to develop their own sustainable design theory for research and practice;

ARCH 8567 Site and Water Issues in Sustainable Design
A-F only, 3 credit(s); prereq [5512, [grad MS or MArch student]] or instr consent ;
Instructor: Strong, Richard B.
Description: This course looks at the issues of water in relation to buildings, sites and sustainable use of water. The ?Urban Water Cycle? will be used to calibrate the sustainable use of urban water resources. Water balance formulas as well as water use calculators and sustainable tools will be used to mitigate the impacts of development on the existing urban water cycle. The class will look at water at both a watershed and site scale; comparing existing water infrastructure with a new concepts of sustainable water strategies. This is a research course but all the class? s exercises are design oriented. Students will have to apply the contents of the course to a design problem that required the student solve the interior and exterior impacts of urban water using design solutions.

ARTS 1001 Concepts in Visual Art
4 credit(s);
Instructor: STAFF
Description: Concepts of visual art-making in contemporary and historical contexts. The media, environment, and concerns of the practicing artist. Creative process, visual expression, criteria. Aesthetic foundation for beginning studio courses. Visiting artists, museum and gallery visits, creative presentations. Required of all art majors.

ARTS 1101 Drawing
4 credit(s); Meets CLE req of Arts/Humanities;
Instructor: STAFF
Description: Introduction to fundamental principles and processes of drawing; exploration of various drawing media. Work from still life, nature, the life model, and imagination.

ARTS 1102 Painting
4 credit(s); prereq 1101 or instr consent Note: Students without stated prerequisites will not be allowed to continue in this course:
Instructor: STAFF
Description: Introduction to painting with attention to understanding and applying the fundamental principles of spatial organization and color interaction.

ARTS 1301 Sculpture
4 credit(s); Meets CLE req of Arts/Humanities;
Instructor: STAFF
Description: An introduction to sculptural practice examining materials, methods, concepts, and history with emphasis on the correlation between concepts and materials. Work in clay, plaster, metal, and wood.

ARTS 1501 Printmaking: Intaglio and Lithography
4 credit(s); Meets CLE req of Arts/Humanities;
Instructor: STAFF
Description: 1501-005 Introduction to Printmaking: Relief and Intaglio. This is an introductory course that explores the concepts and techniques of intaglio processes and relief approaches of woodcut and linoleum as fine art. Students acquire skill and understanding into the aesthetics of of the print, the role of the multipie and the nature of graphics as it relates to personal expression. Familiarization to strategies and concepts of printmaking through historical and contemporary usage is addressed. Emphasis on understanding the interrelationship of process, materials and ideas. This course is designed for undergraduate students across disciplines. It introduces techniques artists employ in the development of visual statements. Hands-on involvement in the production of artwork.
Style: 40% Lecture. 30% Discussion. 30% Laboratory.
Grading: 15% mid exam, 10% reports/papers, 25% class participation, 50% other evaluation. creative engagement
Exam Format: short answer, multiple choice

ARTS 1502 Printmaking: Relief, Screen, and Digital Processes
4 credit(s); Meets CLE req of Arts/Humanities;
Instructor: STAFF
Description: Introduction to techniques of relief (linoleum and woodcut), screenprint and digital printmaking. Historical approaches and use through contemporary materials, concepts and practices. Emphasis on the interrelationship of process, materials and ideas.

ARTS 1601 Experimental and Media Arts
4 credit(s); Meets CLE req of Arts/Humanities;
Instructor: STAFF
Description: This course is intended for the beginning level or non-experienced student interested in exploring new tools, technologies and processes in electronic and digital art. The class includes assignments focused on digital imaging making, digital video, digital sound, digital animation, interactive processes and basic programming languages. Students will explore the developing aesthetic and theoretical domains presented with the intergration of new technologies into creative art practice.
Style: 20% Lecture, 20% Discussion. 60% creative art production
Grading: 10% in-class presentation, 20% class participation, 70% other evaluation. Production and critical evaluation of student art projects

ARTS 1701 Photography
4 credit(s); Meets CLE req of Arts/Humanities;
Instructor: STAFF
Description: Course presents conceptual, technical, and historical aspects of photography within the fine arts context. Emphasis on the creative process through hands-on experience in use of camera, film development, enlarging, and printing. Silver processes. Student needs a 35mm, single lens reflex film camera.
Style: 25% Lecture, 25% Discussion, 50% Laboratory.
Grading: 15% mid exam, 30% final exam, 20% in-class presentation, 25% laboratory evaluation, 10% problem solving.
Exam Format: performance

ARTS 1702 Digital Photography
4 credit(s); Meets CLE req of Arts/Humanities;
Instructor: STAFF
Description: Introduction to conceptual, technical and historical aspects of photography as a creative medium using digital technology. Digital image capture, related software, digital output and studio procedures. Historical issues, contemporary practice.

ARTS 1801 Ceramics
4 credit(s); Meets CLE req of Arts/Humanities;
Instructor: STAFF
Description: Fundamentals of wheel-thrown and hand-built ceramics as forms of creative expression. Introduction to clay, glazes, and firing techniques.
ARTS 1905 Freshman Seminar  
A-F only, 3 credit(s); prereq freshman;  
Instructor: Baeumler, Christine Arle  
Description: Student may contact the instructor or department for information.

ARTS 1905 Freshman Seminar  
A-F only, 3 credit(s); prereq freshman;  
Instructor: Potratz, Wayne E  
Description: Visual Arts in the Twin Cities. The course will explore various manifestations of the visual arts in the Twin City area through field trips to various art venues, visits to artist’s studios, hands-on projects, readings and discussion. The course will ask the question: How do artists, collectors, curators, museum and gallery personnel and administrators, arts education institutions, critics, and the media relate to produce the vibrant art scene that exists in the metropolitan area? Through the text, the visual art seen at the various venues, and the presentations of the seminar guests, the course will also examine the relationship between modernism and post-modernism in contemporary art.  
Style: 20% Discussion, 10% Student Presentation, 60% Field Trips. 10% Guest Speakers.  
Grading: 25% special projects, 40% in-class presentation, 35% class participation.  
Exam Format: No Final; final presentation in any topic relevant to the seminar and in any form.

ARTS 3101 Intermediate Drawing  
4 credit(s); prereq 1001, 1101 Note: Students without stated prerequisites will not be allowed to continue in this course.;  
Instructor: Kuhr, Alexis  
Description: Student may contact the instructor or department for information.

ARTS 3102 Intermediate Painting  
4 credit(s); prereq 1001, 1101, 1102 Note: Students without stated prerequisites will not be allowed to continue in this course.;  
Instructor: Morgan, Clarence E.  
Description: Student may contact the instructor or department for information.

ARTS 3303 Sculpture: Metalcasting  
4 credit(s); prereq 1001, 1301 Note: Students without stated prerequisites will not be allowed to continue in this course.;  
Instructor: STAFF  
Description: Make cast metal sculpture in the new state-of-the-art University of Minnesota Sculpture Foundry in the new Regis Center for Art. Metalcasting of Sculpture is an intensive course where you will be asked to think creatively with cast aluminum, bronze, and iron. Prerequisites: ArtS 1301 Basic Sculpture and ArtS 1101 Introduction to Visual Arts. Required Text: "Hot Metal--A Complete Guide to the Metalcasting of Sculpture," Potratz. Available at bookstore or on reserve in Wilson Library. Slide lectures, demonstrations, critiques, class participation. Required lab for Fall evening course; see schedule for the day and time. Spring course requires participation in the Annual Minnesota Iron Pour. Expect to spend at least 6 hours per week outside of class working on your sculpture.  
Style: 5% Lecture, 10% Discussion, 85% Studio. Demonstrations, critique, studio work in the foundry.  
Grading: 20% reports/papers, 10% quizzes, 60% other evaluation. Creative work in Cast Metal  
Exam Format: Individual and Group Critique

ARTS 3444 Major Project  
S-N only, 1-3 credit(s), max credits 3, 1 completion allowed; prereq instr consent.;  
Instructor: STAFF  
Description: The major project in Art is intended to be a "capstone" experience for the senior majoring in Art. It is a required course for graduation with a major in art. All BA students majoring in art will participate in a group exhibition in the Regis Center Public Spaces scheduled near the end of the graduating semester. The student can include work in any format, from previous or current courses or independent studies, that they consider representative of their best work. The minimum experience (1 credit) involves participation in a series of meetings with the DUS at pre-announced times. At these meetings, students develop professional skills (preparation of resume, artist's statement, exhibition protocols, etc). Students also attend a variety of departmental presentations, visiting artist lectures, exhibitions. A second option is for students who want to self-design a project (1-3 credits) with an individual, regular faculty member. Through the self-designed project, students are encouraged to clarify their own visual concepts. For the individually designed experience, students must complete the Major Project Proposal Contract available from the Art Advising Office, E223 Regis Center.

ARTS 3496 Internship in the Arts  
S-N only, 1-3 credit(s), max credits 3, 1 completion allowed; prereq BFA Art major, instr consent.;  
Instructor: STAFF  
Description: The internship requirement for students in the BFA Art program may be satisfied through field work at local, regional or national arts organizations or with professional artists. BFA candidates gain experience in activities or in the administration of art or art-based organizations. Student and host organization or artists file a mutual contract approved by the student’s BFA Faculty Mentor prior to registration; student and host organization provide a written evaluation of the internship experience at the end of the specified experience.

ARTS 3499 Internship at Katherine E. Nash Gallery  
S-N only, 3 credit(s); prereq 1001, instr consent.;  
Instructor: Oransky, Howard Lee  
Description: Student may contact the instructor or department for information.

ARTS 3510 Intermediate Printmaking: Traditional and Contemporary Approaches  
4 credit(s), max credits 8; prereq 1001, [1501 or 1502];  
Instructor: Knopp, Jerald A  
Description: Student may contact the instructor or department for information.
ARTS 3602 Narrative Digital Video
4 credit(s); prereq 1001W, 1601; Note: Students without stated prerequisites will not be allowed to continue in this course.;
Instructor: Lukkas,Lynn Tjerman
Description: This course will focus on experimental forms of video art, including experimental non-narrative video, video installation, and video combined with live art works. Students will have the opportunity to explore the aesthetic and conceptual intersections between Film and Art while producing original works that explore contemporary digital technologies alongside super 8 filmmaking. Presentations and screenings of experimental film and video art work from 1900 to the present will be included.

ARTS 3605 Sound Art
4 credit(s); prereq 1001W, 1601; 
Instructor: Willow,Diane
Description: Sound Art shapes aesthetic space and time. It is an interdisciplinary media genre that relates the visual arts and music but is neither music nor visual art. We will investigate the powerful capacity of sound to shift our perception through the experience of listening and the process of producing sound art. A range of creative explorations and technologies will be introduced to engage you in the artistic process of realizing your individual and collaborative ideas with sound. We will take an experimental approach to this hybrid form of contemporary art. The experience of listening as well as a series of sonic explorations and sound sketches, an artist presentation, two sound art projects and one independent project will provide opportunities for you to develop basic fluency with the process of creating your artistic language with sound. Selected readings, responses, and discussions will broaden and deepen your understanding of the emergence and practice of this hybrid form of contemporary art. The content of this course evolves according to the interests of the participating students. The collective endeavors of this semester-long investigation will be documented and archived on the course blog through the active participation of all students.

ARTS 3609 Art for the People/Art on Wheels
4 credit(s); prereq [1001, 1601] or instr consent ;
Instructor: Momeni,Ali
Description: Student may contact the instructor or department for information.

ARTS 3701 Photography: Silver Processes
4 credit(s); prereq 1001, 1701 Note: Students without stated prerequisites will not be allowed to continue in this course.;
Instructor: Henkel,James V
Description: This course is designed to involve the student in issues relating to photography as a descriptive art making tool. Students will be expected to apply testing of materials and darkroom techniques to a variety of assignments which are designed to explore thematic topics which are traditional to photographic practice in a contemporary and innovative way. A large percentage of this class involves the mastery of craft and skill based approaches to traditional black and white photographic materials. A historical overview as well as contemporary approaches will be presented. A 35 mm single lens reflex or larger format film style film camera is necessary for this class.

ARTS 3801 Ceramics: Wheel Throwing
4 credit(s), max credits 8; prereq 1001, 1801 Note: Students without stated prerequisites will not be allowed to continue in this course.;
Instructor: Yamada,Tetsuya
Description: Student may contact the instructor or department for information.

ARTS 3802 Ceramics: Handbuilding
4 credit(s), max credits 8; prereq 1001, 1801 Note: Students without stated prerequisites will not be allowed to continue in this course.;
Instructor: Pharis,Mark W
Description: Student may contact the instructor or department for information.

ARTS 5110 Advanced Drawing
4 credit(s), max credits 12, 4 completions allowed; prereq 3101 or 3111 or instr consent Note: Students without stated prerequisites will not be allowed to continue in this course.;
Instructor: Lyon,Joyce
Description: Student may contact the instructor or department for information.

ARTS 5110 Advanced Drawing
4 credit(s), max credits 12, 4 completions allowed; prereq 3101 or 3111 or instr consent Note: Students without stated prerequisites will not be allowed to continue in this course.;
Instructor: Gray,Lynn Arlyn
Description: Student may contact the instructor or department for information.

ARTS 5120 Advanced Painting
4 credit(s), max credits 12, 4 completions allowed; prereq 3102 or instr consent Note: Students without stated prerequisites will not be allowed to continue in this course.;
Instructor: Morgan,Clarence E.
Description: Student may contact the instructor or department for information.

ARTS 5330 Advanced Sculpture: Metal Casting
4 credit(s), max credits 12, 4 completions allowed; prereq 3303 or instr consent Note: Students without stated prerequisites will not be allowed to continue in this course.;
Instructor: Potratz,Wayne E
Description: Metal casting of Sculpture is a course where you are asked to think imaginatively and work creatively with a wide variety of materials. The typical student makes three sculptures, one cast in aluminum, one cast in bronze, and one iron casting. Mold materials include resin bonded sand, ceramic shell, green sand, or other sand molding systems. The course is conducted in the University of Minnesota Sculpture Foundry, one of the finest metalcasting facilities at the university level in the nation; the foundry features a 75 KW Induction furnace. Each semester, the coke-fired cupolette is used for an iron pour, which includes guest artists from around the country. This is an advanced sculpture course with an emphasis on the development of personal imagery in sculpture. At the 5000 level, the course operates more like a tutorial; you should be well on the way to setting your own goals for your work, both conceptually and technically. Thus the assignments do not dictate subject matter. Be prepared to articulate what you want to accomplish within the semester. This fall semester, the course will also explore the Tataara, an ancient Japanese process for making steel directly from Iron Ore. Students will have the opportunity to assist in the building and firing of a clay tataara during the month of October. Participants will receive a portion of the steel made
Style: 5% Lecture, 5% Discussion, 10% Demonstration, 75% Studio, 5% Guest Speakers. This is NOT a topics course!!
Grading: 10% reports/papers, 10% attendance, 5% class participation, 75% other evaluation. Paper is related to the readings and your own work in sculpture
Exam Format: Final critique of sculpture produced

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr;
Instructor: Pharis,Mark W
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr;
Instructor: Lukkas,Lynn Tjerman
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr; Instructor: Baeumer,Christine Arle
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr; Instructor: Morgan,Clarence E.
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr; Instructor: Henkel,James V
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr; Instructor: Rose,Thomas Albert
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr; Instructor: Lane,Thomas J
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr; Instructor: Krepps,Jerald A
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr; Instructor: Kufr,Alexis
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr; Instructor: Estep,Jan
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr; Instructor: Yamada,Tetsuya
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr; Instructor: Willow,Diane
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr; Instructor: Schmid,Jenny
Description: Student may contact the instructor or department for information.

ARTS 5444 Bachelor of Fine Arts Exhibition
S-N only, 1 credit(s); prereq 5400, BFA candidate, sr; Instructor: Momeni,Ali
Description: Student may contact the instructor or department for information.

ARTS 5490 Workshop in Art
4 credit(s), max credits 12, 12 completions allowed; Instructor: Lukkas,Lynn Tjerman
Description: Student may contact the instructor or department for information.

ARTS 5510 Advanced Printmaking
4 credit(s), max credits 12, 3 completions allowed; prereq 3510 or instr consent Note: Students without stated prerequisites will not be allowed to continue in this course.; Instructor: Schmid,Jenny
Description: This class offers students the opportunity to develop their work by exploring advanced techniques including photo-lithography, mono-printing, polyester plates and the use of color in multiple layers. Students will be introduced to contemporary printmakers and conceptual issues through several slide lectures: Intensive critiques will also be integral to the functioning of this class. Students are expected to be self-motivated and have a committed studio practice in order to develop an advanced body of work.

ARTS 5620 Narrative Digital Video
4 credit(s), max credits 12, 3 completions allowed; prereq 3602 Note: Students without stated prerequisites will not be allowed to continue in this course.; Instructor: Lukkas,Lynn Tjerman
Description: This course will focus on experimental forms of video art, including experimental non-narrative video, video installation, and video combined with live art works. Students will have the opportunity to explore the aesthetic and conceptual intersections between Film and Art while producing original works that explore contemporary digital technologies alongside super 8 filmmaking. Presentations and screenings of experimental film and video art work from 1900 to the present will be included.

ARTS 5650 Advanced Sound Art
4 credit(s), max credits 12, 3 completions allowed; prereq 3605; Instructor: Willow,Diane
Description: Student may contact the instructor or department for information.

ARTS 5690 Art for the People/Art on Wheels: Advanced Projects
4 credit(s), max credits 12, 3 completions allowed; prereq ArtS 3609; Instructor: Momeni,Ali
Description: Student may contact the instructor or department for information.

ARTS 5710 Advanced Photography
4 credit(s), max credits 12, 3 completions allowed; prereq Two semesters of 3xxx photography or instr consent Note: Students without stated prerequisites will not be allowed to continue in this course.; Instructor: Rainio,Minna Kristiina
Description: Advanced Photography: Found and reused. The memories and histories of images. "Photography is a social institution that, since its inception, has been a key site of collective remembering. Like film and television, photographic images increasingly meditate our collective experience and memory of events and such is their cultural currency that we tend to accept their memory-images as our own." Nancy Wood "how we use films and other images and representations to make ourselves, how we construct our own histories through memory, even how we position ourselves within wider, more public, histories." Annette Kuhn This course examines the
ARTS 5990 Independent Study in Art
1-4 credit(s), max credits 12, 4 completions allowed; prereq Major, completed regular course with instructor, instr consent;
Instructor: Estep, Jan
Description: Student may contact the instructor or department for information.

ARTS 9990 Independent Study in Art
1-4 credit(s), max credits 12, 4 completions allowed; prereq Major, completed regular course with instructor, instr consent;
Instructor: Rose, Thomas Albert
Description: Student may contact the instructor or department for information.

ARTS 9990 Independent Study in Art
1-4 credit(s), max credits 12, 4 completions allowed; prereq Major, completed regular course with instructor, instr consent;
Instructor: Lane, Thomas J
Description: Student may contact the instructor or department for information.

ARTS 9990 Independent Study in Art
1-4 credit(s), max credits 12, 4 completions allowed; prereq Major, completed regular course with instructor, instr consent;
Instructor: Potratz, Wayne E
Description: Student may contact the instructor or department for information.

ARTS 9990 Independent Study in Art
1-4 credit(s), max credits 12, 4 completions allowed; prereq Major, completed regular course with instructor, instr consent;
Instructor: Krepps, Jerald A
Description: Student may contact the instructor or department for information.

ARTS 9990 Independent Study in Art
1-4 credit(s), max credits 12, 4 completions allowed; prereq Major, completed regular course with instructor, instr consent;
Instructor: Kuhr, Alexis
Description: Student may contact the instructor or department for information.

ARTS 9990 Independent Study in Art
1-4 credit(s), max credits 12, 4 completions allowed; prereq Major, completed regular course with instructor, instr consent;
Instructor: Estep, Jan
Description: Student may contact the instructor or department for information.

ARTS 9990 Independent Study in Art
1-4 credit(s), max credits 12, 4 completions allowed; prereq Major, completed regular course with instructor, instr consent;
Instructor: Yamada, Tetsuya
Description: Student may contact the instructor or department for information.

ARTS 9990 Independent Study in Art
1-4 credit(s), max credits 12, 4 completions allowed; prereq Major, completed regular course with instructor, instr consent;
Instructor: Willow, Diane
Description: Student may contact the instructor or department for information.
ARTS 5990 Independent Study in Art
1-4 credit(s), max credits 12, 4 completions allowed; prereq
Major, completed regular course with instructor, instr consent;
Instructor: Schmid,Jenny
Description: Student may contact the instructor or department for information.

ARTS 5990 Independent Study in Art
1-4 credit(s), max credits 12, 4 completions allowed; prereq
Major, completed regular course with instructor, instr consent;
Instructor: Momeni,Ali
Description: Student may contact the instructor or department for information.

ARTS 8010 Drawing and Painting: Theory and Practice
3 credit(s), max credits 12, 4 completions allowed; prereq
Art MFA student;
Instructor: Morgan,Clarence E.
Description: Student may contact the instructor or department for information.

ARTS 8010 Drawing and Painting: Theory and Practice
3 credit(s), max credits 12, 4 completions allowed; prereq
Art MFA student;
Instructor: Gray,Lynn Arlyn
Description: Student may contact the instructor or department for information.

ARTS 8010 Drawing and Painting: Theory and Practice
3 credit(s), max credits 12, 4 completions allowed; prereq
Art MFA student;
Instructor: Kuhr,Alexis
Description: Student may contact the instructor or department for information.

ARTS 8400 Theoretical Constructions in Contemporary Art
3 credit(s), max credits 6;
Instructor: Estep,Jan
Description: Student may contact the instructor or department for information.

ARTS 8410 Studio Critique
A-F only, 3 credit(s), max credits 6; prereq 8400;
Instructor: Willow,Diane
Description: Student may contact the instructor or department for information.

ARTS 8500 Printmaking: Theory and Practice
3 credit(s), max credits 12, 4 completions allowed;
Instructor: Schmid,Jenny
Description: Student may contact the instructor or department for information.

ARTS 8600 Time and Interactivity: Theory and Practice
3 credit(s), max credits 12, 4 completions allowed;
Instructor: Lukkas,Lynn Tjernan
Description: Student may contact the instructor or department for information.

ARTS 8600 Time and Interactivity: Theory and Practice
3 credit(s), max credits 12, 4 completions allowed;
Instructor: Willow,Diane
Description: ARTS 8600 will meet with ARTS 5670 during Spring 2011. This seminar will construct a collaborative research situation in which we explore ephemeral, mobile, and responsive ways of engaging with public space. With the eStudio* as our catalyst, we will experiment with a broad range of materials, fabrication modalities, and technologies that emphasize a conceptually and physically light approach to public presence. Included in our palette of possibilities are: inflatables, floatables, membrane structures, responsive surfaces, second skins, transformable volumes, soft circuits, mobile environments, and wearable architecture. A series of guest artists, architects, scientists, designers, engineers, and curators will enliven our discussions and expand the ways that we imagine and realize interdisciplinary collaborations. This seminar is open to new and combined forms of media, making, theorizing, and imagininge. It is designed to attract people with a broad range of interests, disciplinary perspectives, and prior knowledge. Prerequisites include a lively sense of curiosity, an interest in exploring new materials, technologies and ways of thinking, an experimental approach to participatory engagement with public space and an enjoyment of collaborative learning processes. Weekly seminars emphasize the process of conceptualizing and prototyping ephemeral, mobile and responsive insertions into and enhancements of public spaces. An eclectic set of readings, student-generated presentations, and guest presenters introduce new concepts, perspectives, and techniques through lectures and studio workshops. This project-based seminar will include individual and collaborative research, public fieldwork, articulate blog documentation, active concept sketches, experimental processes, and public installations of project prototypes. Contact: Diane Willow willow (@)umn (dot) edu eStudio | WV206 Regis Center for Art The eStudio is a catalyst for digital dialogues that explore creative processes connecting tangible materials in hand and digital modes of fabrication with programmable machines. The eStudio is designed to create an inclusive and participatory environment that invites a reimagining of the permeable boundaries shaped by digital design and fabrication technologies, emerging materials and sustainable practices, experimental modes of making and tacit knowledge. The physical space provides a clean room required by the machines and a conceptual and cooperative learning place intended to enhance the experience of artists engaged in this creative research.
Style: 15% Discussion, 15% Small Group Activities, 15% Student Presentation, 5% Field Trips, 30% Studio, 20% Guest Speakers. the professor's teaching style cultivates a community of participatory learners
Grading: 40% special projects, 20% in-class presentation, 40% class participation. participation includes attendance, articulate posts to the course blog and active engagement with all facets of the seminar experience.
Exam Format: a series of research projects, active sketches, project prototypes and public installations/responses/actions constitute the work that is evaluated.

ARTS 8600 Time and Interactivity: Theory and Practice
3 credit(s), max credits 12, 4 completions allowed;
Instructor: Momeni,Ali
Description: Student may contact the instructor or department for information.

ARTS 8700 Photography: Theory and Practice
3 credit(s), max credits 12, 4 completions allowed;
Instructor: Henkel,James V
Description: Student may contact the instructor or department for information.

ARTS 8700 Photography: Theory and Practice
3 credit(s), max credits 12, 4 completions allowed;
Instructor: Estep,Jan
Description: Contemporary issues in the production of photographic images. Generally restricted to graduate students in the Department of Art MFA program. Please contact instructor for permission to register for this course.

ARTS 8700 Photography: Theory and Practice
3 credit(s), max credits 12, 4 completions allowed;
Instructor: Rainio,Mirna Kristiina
Description: Student may contact the instructor or department for information.

ARTS 8800 Ceramics: Theory and Practice
A-F only, 3 credit(s), max credits 12, 4 completions allowed;
Instructor: Lane,Thomas J
ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Pharis, Mark W
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Lyon, Joyce
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Lukas, Lynn Tjernan
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Baeumler, Christine Arle
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Feinberg, David L
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Morgan, Clarence E.
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Katsiaficas, Diane
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Henkel, James V
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Rose, Thomas Albert
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Lane, Thomas J
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Gray, Lynn Arlyn
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Potratz, Wayne E
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Krepps, Jerald A
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Kuhr, Alexis
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Estep, Jan
Description: Independent study directed toward the graduate MFA thesis project. Generally restricted to graduate students in
the Department of Art's MFA program in their third and final year of study. Please contact instructor for permission to register for
this course.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Yamada, Tetsuya
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Willow, Diane
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq
Art MFA candidate, passed oral/written prelim, instr
counsel;
Instructor: Stanislav, Andrea
Description: Student may contact the instructor or department for information.
ARTS 8990 M.F.A. Creative Thesis
3 credit(s); max credits 18, 18 completions allowed; prereq Art MFA candidate, passed oral/written prelim, instr consent;
Instructor: Schmid, Jenny
Description: Student may contact the instructor or department for information.

ARTS 8990 M.F.A. Creative Thesis
1-9 credit(s), max credits 18, 18 completions allowed; prereq Art MFA candidate, passed oral/written prelim, instr consent;
Instructor: Momeni, Ali
Description: Student may contact the instructor or department for information.

Art History
338 Heller Hall

ARTH 1001 Introduction to Art History: Prehistoric to Contemporary
3 credit(s); Meets CLE req of Arts/Humanities; Instructor: Eliason, Lois Munemitsu
Description: Student may contact the instructor or department for information.

ARTH 1002W Why Art Matters
4 credit(s); Meets CLE req of Writing Intensive;
Instructor: DeLand, Lauren A
Description: Student may contact the instructor or department for information.

ARTH 1907W Freshman Seminar
3 credit(s); prereq F or fewer than 30 cr; Meets CLE req of Writing Intensive;
Instructor: Ostrow, Steven F
Description: Student may contact the instructor or department for information.

ARTH 1921W Introduction to Film Study
4 credit(s); Credit will not be granted if credit has been received for: CSCL 1921; Meets CLE req of Arts/Humanities; Meets CLE req of Writing Intensive;
Instructor: Silberman, Robert B
Description: This course provides an introduction to the fundamentals of film analysis and media study. Readings and lectures cover the technical, economic, social, and cultural aspects of film, from how the film industry and studios work to how films are marketed in the mass media and exhibited. Primary emphasis is on feature-length narrative fiction films, but attention is also paid to documentaries, animation, avant-garde and experimental film and video, television (news, sit-coms, soaps, sports, MTV, etc.) and New Media. The lectures and discussions will consider the relationship between the media and other areas of culture (politics, the music business, the mall world) and between film studies and other areas of knowledge (social history, literary study, art history, etc.). The history of film and media studies as a discipline is also considered. The course uses detailed analysis of a series of films, including Murnau’s “Nosferatu,” John Ford’s “Stagecoach,” Michael Curtiz’s “Casablanca,” Jean-Luc Godard’s “Breathless,” Ridley Scott’s “Blade Runner,” Spike Lee’s “Do the Right Thing,” and David Russell’s “Three Kings” to develop an understanding of the basic concepts of film analysis and the basic elements of film production and distribution. These films also provide an ideal arena for exploring questions about the cinematic representation of minorities, gender roles, and the relationship between Hollywood and foreign film industries.
Style: 50% Lecture, 25% Discussion. Screenings
Grading: 20% midterm exam, 35% final exam, 40% reports/papers.
Exam Format: Exams include Short answer (ID, multiple choice, definition + example) and take-home essays.

ARTH 3172 Greek and Roman Art and Archaeology
3 credit(s); Instructor: Canepa, Matthew P.
Description: This course introduces students to the art history of ancient Greece and Rome, the Near East, and the Hellenistic world. Students will learn about the importance of art and architecture in the making of art and the making of scientific knowledge intersected in early modern Europe. We will explore connections between scientific curiosity and the visual arts by considering major artists (Leonardo, Durer, Vermeer, Rembrandt, etc.). We will also consider the artfulness of visual materials we tend to classify as “scientific,” including scientific imagery and diagrams, geographical maps, cabinets of curiosities, and new visual science.
technologies such as the telescope and microscope.

**ARTH 3949 East/West, West/East**
- **3 credit(s):**
- **Instructor:** Weisberg, Gabriel
- **Description:** Student may contact the instructor or department for information.

**ARTH 3930 Junior-Senior Seminar: Material Display/Immaterial Age: Exhibition Today**
- **A-F only, 3 credit(s); prereq [Jr or sr] ArtH major, instr consent:**
- **Instructor:** Blocker, Jane M
- **Description:** Student may contact the instructor or department for information.

**ARTH 3975 Directed Museum Experience**
- **OPT No Aud, 1-2 credit(s), max credits 2, 1 completion allowed; prereq instr consent:**
- **Instructor:** STAFF
- **Description:** The student is responsible for obtaining an internship in an art institution or museum which must be approved by the Director of Undergraduate Studies in Art History. For 2 credits the internship must be for at least 10 hours per week. S/N registration only. Open to majors and non-majors. Speak with the ArTH DUGS for more information.
- **Style:** On-site internship.
- **Grading:** Grade (S-N) recommended by intern supervisor.

**ARTH 3993 Directed Study**
- **A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent:**
- **Instructor:** Weisberg, Gabriel
- **Description:** Student may contact the instructor or department for information.

**ARTH 3993 Directed Study**
- **A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent:**
- **Instructor:** Asher, Catherine B
- **Description:** Student may contact the instructor or department for information.

**ARTH 3993 Directed Study**
- **A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent:**
- **Instructor:** Weisberg, Gabriel
- **Description:** Student may contact the instructor or department for information.

**ARTH 3993 Directed Study**
- **A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent:**
- **Instructor:** Asher, Frederick M
- **Description:** Student may contact the instructor or department for information.

**ARTH 3993 Directed Study**
- **A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent:**
- **Instructor:** Silberman, Robert B
- **Description:** Student may contact the instructor or department for information.

**ARTH 3993 Directed Study**
- **A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent:**
- **Instructor:** Blocker, Jane M
- **Description:** Student may contact the instructor or department for information.

**ARTH 5494 East/West, West/East**
- **3 credit(s):**
- **Instructor:** Weisberg, Gabriel
- **Description:** Student may contact the instructor or department for information.

**ARTH 5777 The Diversity of Traditions: Indian Art 1200 to Present**
- **3 credit(s):**
- **Instructor:** Asher, Catherine B
- **Description:** This course will consider the development of Indian art and architecture from the introduction of Islam as a major political power at the end of the 12th century to the present. The Muslim rulers brought new traditions, for example, the tomb, of
which the most famous example is the Taj Mahal built in the mid-17th century. We will study the developments leading to this magnificent structure as well as the schools of painting that are the products of Muslim and Hindu rulers. The course will also consider artistic production in the important Hindu, Sikh and Christian kingdoms that ruled India concurrently with the great Muslim powers. In the 18th century, colonial forces entered the Indian subcontinent, resulting in significant innovative artistic trends. We will discuss these as well as the subsequent nationalist schools that develop just before Independence prior to 1947. We will probe which forms and ideas seem to be inherently Indian, asking which ones transcend dynastic, geographic and religious differences and which forms and ideas are consistent throughout these periods of political and ideological change. This class will be a combination of lecture and discussion. Undergraduates will write a 8-10 page research paper; graduate students should see the instructor for requirements. Images will be available on the class Moodle web site.

**Style:** 70% Lecture, 30% Discussion.

**Grading:** 88% reports/papers, 12% class participation.

**Exam Format:** take home essays.

**Description:** Student may contact the instructor or department for information.

**ARTH 5993 Directed Study**

A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent;

**Instructor:** Asher, Catherine B

**Description:** Student may contact the instructor or department for information.

**ARTH 5993 Directed Study**

A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent;

**Instructor:** Weisberg, Gabriel

**Description:** Student may contact the instructor or department for information.

**ARTH 5993 Directed Study**

A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent;

**Instructor:** Silberman, Robert B

**Description:** Student may contact the instructor or department for information.

**ARTH 5993 Directed Study**

A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent;

**Instructor:** Blocker, Jane M

**Description:** Student may contact the instructor or department for information.

**ARTH 5993 Directed Study**

A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent;

**Instructor:** Gaudio, Michael P

**Description:** Student may contact the instructor or department for information.

**ARTH 5993 Directed Study**

A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent;

**Instructor:** Ostrow, Steven F

**Description:** Student may contact the instructor or department for information.

**ARTH 5993 Directed Study**

A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent;

**Instructor:** Afanador-Pujol, Angelica J

**Description:** Student may contact the instructor or department for information.

**ARTH 5993 Directed Study**

A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent;

**Instructor:** Marshall PhD, Jennifer Jane

**Description:** Student may contact the instructor or department for information.

**ARTH 5993 Directed Study**

A-F only, 1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent;

**Instructor:** Canepa PhD, Matthew P.

**Description:** Student may contact the instructor or department for information.

**ARTH 8001 Art Historiography: Theory and Methods**

A-F only, 3 credit(s);

**Instructor:** Blocker, Jane M

**Description:** Student may contact the instructor or department for information.

**ARTH 8920 Seminar: Film History and Criticism**

3 credit(s), max credits 12, 4 completions allowed; prereq instr consent;

**Instructor:** Silberman, Robert B

**Description:** Student may contact the instructor or department for information.

**Arts and Cultural Leadership**

20 Classroom Office Building

**ACL 8002 Arts and Cultural Nonprofit Board Practicum**

A-F only, 1 credit(s), max credits 2; prereq ACL student, dept consent;

**Instructor:** Ober, Gayle Marie

**Description:** Student may contact the instructor or department for information.

**Asian American Studies**

104 Scott Hall

**AAS 1101 Imagining Asian America**

3 credit(s); Meets CLE req of Diversity and Soc Justice US; meets CLE req of Social Sciences;

**Instructor:** Lee, Erika

**Description:** Asian Americans are the fastest-growing minority population in the United States. Their histories, cultures, and experiences have become increasingly crucial to understanding contemporary American citizenship, identity, and values. We will look at past and present aspects of the diverse and multifaceted vision of “Asian America,” using histories, films, memoirs, and other texts as illustrations. We will also study how the history of immigration, exclusion, and naturalization laws has visibly shaped existing Asian American communities and identities, and, how “Asian America” is central to a more general understanding of American popular culture and public life. This course satisfies LE Requirements for Cultural Diversity and Citizenship and Public Ethics. Readings include memoirs, historical and contemporary documents. We will view short documentaries and use other media. Class time will involve discussion and small group projects. Assignments will include short essays and a final project.

**Grading:** 20% attendance, 80% other evaluation. 6 short essays, 2-3 pages (60%) Group curriculum project - presentation oral and written (20%)

**AAS 1902 Freshman Seminar**

3 credit(s); prereq Fr; Meets CLE req of Diversity and Soc
Justice US;
Description: Although citizens, Asian Americans are often seen as foreigners. How might we account for such an enduring misunderstanding? Is it just mere ignorance or a manifestation of personal prejudice? This seminar refuses to accept these simplified analyses. Instead, we begin by establishing that the study of the past matters in making sense of this problem of misrepresentation. Specifically, we will search for causality at the intersection of histories of Asian immigration and exclusion and of wars, imperialism, and colonialism in Asia involving U.S., Japanese, and European empires. In the process, we will utilize various analytical strategies to understand why Asian immigrants and refugees and Asian Americans are seen as perpetual foreigners. In addition, our reason for exploring the historical roots of misrepresentation is to unearth the agency of Asian Americans. That is to say, we are concerned with how their critical acts of self-representations and cultural forms, such as novels, memoirs, and poems, help generate new ways of thinking about what it means to be Asian American. Our methods of inquiry include personal reflection, oral history and library research, group projects, and written assignments. This course is organized topically. The following themes will serve as analytical entry points to explore the dynamics of Asian American formations: ?Representation?; ?U.S. Wars & Empire?; ?Law & Citizenship?; and ?The Politics of Culture.? Also, this course is organized in a seminar-format. Students are expected to lead and facilitate class discussions, twice in a semester, in pairs or groups of three. Students who are interested in Asian American Studies, immigration/migration, the critique of empire, and the study of race and ethnicity are strongly encouraged to take this class.
Style: 40% Lecture, 60% Discussion.
Grading: 5% attendance, 10% class participation, 85% other evaluation. reports/papers/presentations/discussion facilitation

AAS 3483 Hmong History Across the Globe
3 credit(s);
Description: Student may contact the instructor or department for information.

AAS 4311 Asian American Literature and Drama
A-F only, 3 credit(s);
Instructor: Lee,Josephine D
Description: This course focuses on the literary and theatrical contributions of American artists of Asian descent. Through these novels, memoirs, poetry, stories, and plays, we can understand the particular connections between literary form, expression, and production and the social formations of race, ethnicity, nationalism, class, gender, and sexuality. Asian Americans come from a diverse range of national and cultural backgrounds; likewise their literature and drama presents many different perspectives and experiences. This course will not attempt a survey of these works; rather our readings and discussions will reflect particular preoccupations that regularly surface in these works. These include migration (and its accompanying states of disorientation and acts of reivation), racism and stereotypes, the “road trip,” and redefining home. We’ll pay special attention to Asian American experiences in Minnesota and other parts of the Midwest. This course satisfies the core requirement for the Asian American Studies minor as well as elective requirements for the English major and minor.

AAS 5993 Directed Readings
1-4 credit(s), max credits 8;
Instructor: Lee,Mai Na M.
Description: Student may contact the instructor or department for information.

ALL 1910W Freshman Seminar
A-F only, 3 credit(s), max credits 6; prereq freshman; Meets CLE req of Writing Intensive;
Instructor: Isaka,Maki
Description: “Cross-gender” performance prevails in Japanese literature and theater. For example, while the all-male kabuki theater is well known for actors playing women’s roles, the all-female Takarazuka revue is popular mainly because of its male-role actors. In the realm of literature, memoirs flourished due in large part to prolific ladies-in-waiting at royal court, and yet the one who initiated such a literary tradition was a male aristocrat who posed as a woman in the text. This course aims to contemplate gender in this cultural context. Importantly, our ultimate goal of this course lies not merely in basic information of each example above, let alone in a survey of Japanese culture. We will also gain an applicable working paradigm in which we can further explore the topic of gender. Accordingly, this course has two interlocking aims. First, it provides an understanding of gender performance in the context of Japanese literature and theater. Second, we will be engaged in a theoretical inquiry into “gender.” For example, what does “cross-gender” performance mean? What differences and similarities are to be found in two concepts, “gender” and “gender impersonation”? This course also fulfills the WI requirement. Writing, revising, and class workshops about writing will be an integral part of the class. No previous knowledge of Japanese studies or gender studies is required. Audio-visual materials will be used whenever available and appropriate. Lib Ed req of WI.

ALL 3001 Reading Asian Cultures
A-F only, 3 credit(s);
Instructor: Rouzer,Paul F
Description: Introduction to primary Asian texts in translation, with an emphasis on close reading skills and methodological rigor. Interpretative essays and articles by scholars in the field will also be introduced to some extent. Topic for Fall 2010: Concepts of the “hero” in South Asian, Chinese, and Japanese culture: How did various societies in Asia define the ethos of the “hero” and his relationship to the community? How did versions of the hero change over time, and how was the hero redefined in the context of modern nationalism? What part have traditional gender roles played in defining the hero, and is a “female” hero possible within these traditions? Specific explorations: The Ramayana in India and its re-tellings; the Chinese “knight-errant” and his evolution into the martial artist of popular culture; shifting Japanese constructions of the samurai from medieval war tales to modern literature and film.
Style: 50% Lecture, 50% Discussion.
Grading: 60% reports/papers, 30% quizzes, 10% class participation.

ALL 3334 Voices from Ancient China: The Book of Songs and The Songs of the South
3 credit(s); Meets CLE req of Literature;
Instructor: Allen,Joseph R
Description: Student may contact the instructor or department for information.

ALL 3361W Maps, Pictures, and Writing in the Representation of Taiwan
3 credit(s); Meets CLE req of Arts/Humanities; meets CLE req of Global Perspectives; meets CLE req of Writing Intensive;
Instructor: Allen,Joseph R
Description: We will consider the way the cultures of East Asia (China, Japan, and Taiwan) have shaped the cultural identity of the people on Taiwan, with special concern given to the concepts of colonialism and indigenous autonomy. We will explore how visual media (maps, pictures, photographs, and film) and written texts (travelogues, stories, and essays) are used to contribute to the representation of the people, place, and history of Taiwan, viewed in both historical and contemporary contexts. Students interested in China or Japan will be encouraged to pursue that aspect of cultural identity in Taiwan. Other areas will include the legacy of Fukin (Min’nan) local culture; the question of aboriginal peoples (yuanshumin) in
Taiwan; the presence of American military during the cold war; and the emergence of a global culture in the late 20th century. While the focus of this course is Taiwan, we will be considering larger issues of the representations of ethnicity, culture, and national identity.

ALL 3433W Traditional Japanese Literature in Translation
3 credit(s); prerequisite: No knowledge of Japanese necessary, credit will not be granted if credit received for: Jpn 3162, ALL 3433; Meets CLE req of Literature; Meets CLE req of Writing Intensive.
Instructor: Isaka, Maki
Description: This course examines diverse traditions of Japanese premodern literature. We will begin with traditions in the classical age—the realm of princes, princesses, poets, and the like. We will also pay attention to worlds that not only constitute the foundation of Japanese literature in one way or another, but also continue furnishing images of Japan today: these include samurai, drama, and the floating world of townpeople. No less importantly, we will also investigate their literary and theoretical continuity, or discontinuity, which we may observe today. Toward this end, we will explore several themes in relation to premodern Japanese literature: aesthetics, philosophy, gender, and so forth. This course is open to anyone with an interest. No previous knowledge of Japanese studies is required. No reading knowledge of Japanese is required; all of the readings will be available in English. Audio-visual materials will be used whenever available and appropriate. (Lib Ed req of Ltr [Literature Core]; WI.)

ALL 3536 Modern Korean Literature
3 credits(s);
Instructor: Workman, Travis James
Description: Student may contact the instructor or department for information.

ALL 3637W Modern South Asian Literature
A-F only, 3 credits(s); Meets CLE req of Writing Intensive;
Instructor: Sawhney, Simona
Description: This course will ask the following broad question: how does studying South Asian literature affect the way we think about South Asia on the one hand, and literature on the other? Our premise will be that South Asian literature is not simply a "resource" of knowledge about South Asian culture or politics, but is also a body of literary texts, shaped by literary conventions and histories, and sometimes by a radical questioning of conventions. The literary texts chosen for study are all "about" South Asia in some way, but not all of them are written by South Asian writers. The course will address the following topics: what is "modern" about modern South Asian literature? What are the various ways in which we may understand modernity, particularly in this context? What is "South Asian" about South Asian literature? Are there certain concerns, themes, literary motifs, or narrative styles that recur in this body of texts, or is this simply a convenient term to designate these texts? What kinds of literary debates have taken place in South Asia over the past century, and how do those debates relate to colonialism, neocolonialism and globalization? The reading list will include work by Tagore, Mulk Raj Anand, E. M. Forster, Premchand, Abdullah Hussein and Shyam Selvadurai. This course fulfills the Writing Intensive and the Literature Core requirements.
Style: 50% Lecture, 50% Discussion.

ALL 3920 Topics in Asian Culture
2-3 credits(s), max credits 9, 3 completions allowed;
Instructor: Field, Jesse L
Description: Student may contact the instructor or department for information.

ALL 3990 Directed Study
1-4 credits(s), max credits 16, 4 completions allowed; prerequisite: consent of instructor, department, college;
Instructor: Allen, Joseph R
Description: Individual reading and study with guidance of a faculty member of topics not covered in regular courses. Evaluation Standards and Workload: Variable, depending on course of study determined by the student and faculty. Generally students will be evaluated on written materials, exams, and presentations.

ALL 3990 Directed Study
1-4 credits(s), max credits 16, 4 completions allowed; prerequisite: consent of instructor, department, college;
Instructor: Isaka, Maki
Description: Individual reading and study with guidance of a faculty member of topics not covered in regular courses. Evaluation Standards and Workload: Variable, depending on course of study determined by the student and faculty. Generally students will be evaluated on written materials, exams, and presentations.

ALL 3990 Directed Study
1-4 credits(s), max credits 16, 4 completions allowed; prerequisite: consent of instructor, department, college;
Instructor: Marran, Christine L
Description: Individual reading and study with guidance of a faculty member of topics not covered in regular courses. Evaluation Standards and Workload: Variable, depending on course of study determined by the student and faculty. Generally students will be evaluated on written materials, exams, and presentations.

ALL 3990 Directed Study
1-4 credits(s), max credits 16, 4 completions allowed; prerequisite: consent of instructor, department, college;
Instructor: McGrath, Jason
Description: Individual reading and study with guidance of a faculty member of topics not covered in regular courses. Evaluation Standards and Workload: Variable, depending on course of study determined by the student and faculty. Generally students will be evaluated on written materials, exams, and presentations.

ALL 3990 Directed Study
1-4 credits(s), max credits 16, 4 completions allowed; prerequisite: consent of instructor, department, college;
Instructor: Rouzer, Paul F
Description: Individual reading and study with guidance of a faculty member of topics not covered in regular courses. Evaluation Standards and Workload: Variable, depending on course of study determined by the student and faculty. Generally students will be evaluated on written materials, exams, and presentations.

ALL 3990 Directed Study
1-4 credits(s), max credits 16, 4 completions allowed; prerequisite: consent of instructor, department, college;
Instructor: Workman, Travis James
Description: Student may contact the instructor or department for information.

ALL 5211 Introductory Classical Chinese
3 credits(s); prerequisite: At least one yr of an East Asian language credit will not be granted if credit received for: Chn 3111 or CVN 5211;
Instructor: Rouzer, Paul F
Description: An introduction to the vocabulary and grammar of classical (literary) Chinese, taught through analysis and translation of early Chinese texts. The course is conducted in English and is open to students who are moderately comfortable with Chinese characters (the equivalent of at least two years of
ALL 5900 Topics in Asian Literature: Political Fiction in 20th Century India
3 credit(s), max credits 12, 4 completions allowed;
Instructor: Sawhney, Simona

Description: Sanskrit drama belongs to both a poetic and a theatrical tradition in early India. The texts are highly self-conscious about their status as works of art and artifice, habitually drawing attention to the stage, the director, the audience, and in general, the fact of performance. We will be interested in what these texts indicate about the \textit{activity} of theater/poetry: the nature of its function, value, and pleasure. But we will also be interested in the specific plots and themes of the plays we read. It is clear that most of the extant plays emerge in an elite, courtly context, but should they be read simply as mirroring the world from which they emerge? How may we think about the relationship of these texts to early India? What are the indicators that enable us to decide whether they are affirming or critiquing the ideas, acts, and practices they present? What are the particular ways in which poetry, in Sanskrit drama, both hides and reveals a meaning; why and when does speech become \textit{?poetic}? These questions become especially vexing when we cannot take recourse to biographical or other contextual information, as we often can when reading modern texts. Thus these questions bring to the fore the necessity of reflecting upon our own (often unacknowledged) models of language and textuality. In order to begin an informed and substantial discussion about Sanskrit drama, this course will be divided into three parts. In the first few weeks, we will familiarize ourselves with some modern arguments about how to read texts in ways that do not simply repeat the text's premises, but instead enable a critique of these premises. In this section, students will be introduced to structuralist, Marxist, Freudian, and feminist arguments about textuality. In the second (and longest) part of the course, we will read some very well-known Sanskrit plays (in English), as well as excerpts from Sanskrit texts on dramatic and aesthetic theory. We will not simply attempt to \textit{apply} modern theories of textuality to the early Indian texts, but instead to discuss the presuppositions and aims of both in a comparative manner. In reading Sanskrit dramatic texts, we will consider how they map hierarchy, gender, caste, and courtly power, as well as their representation of love, compassion, anger, and \textit{?interior}? or psychic space in general. In the final section, we will read a set of influential modern interpretations of Sanskrit drama. These will enable us to understand how orientalist and nationalist thought has \textit{framed}? Sanskrit drama in the twentieth century. Several \textit{?modernist}? writers also turned to Sanskrit drama in their search for an Indian modernist idiom. A remarkable example of this phenomenon is a play by the Hindi writer Mohan Rakesh about the life and work of the most famous Sanskrit dramatist, Kalidas. All readings in English, though Sanskrit and Hindi versions will be available for interested students.

ALL 5920 Topics in Asian Culture
3 credit(s), max credits 12, 4 completions allowed;
Instructor: Marran, Christine L

Description: Student may contact the instructor or department for information.

ALL 5990 Directed Study
1-4 credit(s), max credits 16, 4 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Allen, Joseph R

Description: Individual reading and study with guidance of a faculty member of topics not covered in regular courses. Open to advanced students only. Evaluation Standards and Workload: Variable, depending on course of study determined by the student and faculty. Generally students will be evaluated on written materials, exams, and presentations. Graduate students will be asked to do more independent reading and writing, beyond those assigned to undergraduate students.

ALL 5990 Directed Study
1-4 credit(s), max credits 16, 4 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Isaka, Maki

Description: Individual reading and study with guidance of a faculty member of topics not covered in regular courses. Open to advanced students only. Evaluation Standards and Workload: Variable, depending on course of study determined by the student and faculty. Generally students will be evaluated on written materials, exams, and presentations. Graduate students will be asked to do more independent reading and writing, beyond those assigned to undergraduate students.

ALL 5990 Directed Study
1-4 credit(s), max credits 16, 4 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Marran, Christine L

Description: Individual reading and study with guidance of a faculty member of topics not covered in regular courses. Open to advanced students only. Evaluation Standards and Workload: Variable, depending on course of study determined by the student and faculty. Generally students will be evaluated on written materials, exams, and presentations. Graduate students will be asked to do more independent reading and writing, beyond those assigned to undergraduate students.

ALL 5990 Directed Study
1-4 credit(s), max credits 16, 4 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: McGrath, Jason

Description: Individual reading and study with guidance of a faculty member of topics not covered in regular courses. Open to advanced students only. Evaluation Standards and Workload: Variable, depending on course of study determined by the student and faculty. Generally students will be evaluated on written materials, exams, and presentations. Graduate students will be asked to do more independent reading and writing, beyond those assigned to undergraduate students.

ALL 5990 Directed Study
1-4 credit(s), max credits 16, 4 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Marran, Christine L

Description: Individual reading and study with guidance of a faculty member of topics not covered in regular courses. Open to advanced students only. Evaluation Standards and Workload: Variable, depending on course of study determined by the student and faculty. Generally students will be evaluated on written materials, exams, and presentations. Graduate students will be asked to do more independent reading and writing, beyond those assigned to undergraduate students.

ALL 5990 Directed Study
1-4 credit(s), max credits 16, 4 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Rouzer, Paul F

Description: Individual reading and study with guidance of a faculty member of topics not covered in regular courses. Open to advanced students only. Evaluation Standards and Workload: Variable, depending on course of study determined by the student and faculty. Generally students will be evaluated on written materials, exams, and presentations. Graduate students will be asked to do more independent reading and writing, beyond those assigned to undergraduate students.

ALL 5990 Directed Study
1-4 credit(s), max credits 16, 4 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Workman, Travis James

Description: Student may contact the instructor or department for information.
ALL 8001 Critical Approaches to Asian Literary and Cultural Studies
A-F only, 3 credit(s);
Instructor: Workman, Travis James
Description: Student may contact the instructor or department for information.

ALL 8990 Directed Readings
1-4 credit(s), max credits 16, 4 completions allowed; prereq PhD student;
Instructor: Allen, Joseph R
Description: Student may contact the instructor or department for information.

ALL 8990 Directed Readings
1-4 credit(s), max credits 16, 4 completions allowed; prereq PhD student;
Instructor: Isaka, Maki
Description: Student may contact the instructor or department for information.

ALL 8990 Directed Readings
1-4 credit(s), max credits 16, 4 completions allowed; prereq PhD student;
Instructor: Marran, Christine L
Description: Student may contact the instructor or department for information.

ALL 8990 Directed Readings
1-4 credit(s), max credits 16, 4 completions allowed; prereq PhD student;
Instructor: Sawhney, Simona
Description: Student may contact the instructor or department for information.

ALL 8990 Directed Readings
1-4 credit(s), max credits 16, 4 completions allowed; prereq PhD student;
Instructor: McGrath, Jason
Description: Student may contact the instructor or department for information.

ALL 8990 Directed Readings
1-4 credit(s), max credits 16, 4 completions allowed; prereq PhD student;
Instructor: Rouzer, Paul F
Description: Student may contact the instructor or department for information.

ALL 8990 Directed Readings
1-4 credit(s), max credits 16, 4 completions allowed; prereq PhD student;
Instructor: Workman, Travis James
Description: Student may contact the instructor or department for information.

AST 1001 Exploring the Universe
4 credit(s); Credit will not be granted if credit has been received for: AST 1011H; meets CLE req of Environment; meets CLE req of Physical Sciences;
Instructor: Skjellum, Evan D
Description: This course is a scientific exploration of the human place in the universe. We study the origin and history of the universe and the formation of the Earth and the solar system. We compare the Earth's properties with those of the other planets and explore how the heavens have influenced human thought and action. This course includes study of the properties of light and matter and the tools astronomers use to measure radiation from celestial sources. The course covers exciting contemporary topics such as black holes, the expansion of the universe and the search for extra-terrestrial life. Although largely descriptive, the course will occasionally require the use of junior high level math. This course has both a lecture AND lab component. This course is intended for non-science majors: no science background is necessary. CSE students should take AST 1011H.
Style: 50% Lecture, 10% Discussion, 40% Laboratory.
Grading: 32% mid exam, 30% final exam, 14% special projects, 24% laboratory evaluation.
Exam Format: Multiple-choice

AST 1005 Descriptive Astronomy
3 credit(s); prereq non-science major; Credit will not be granted if credit has been received for: AST 1001;
Instructor: Skjellum, Evan D
Description: This course is a scientific exploration of the human place in the universe. We study the origin and history of the universe and the formation of the Earth and the solar system. We compare the Earth's properties with those of the other planets and explore how the heavens have influenced human thought and action. This course includes study of the properties of light and matter and the tools astronomers use to measure radiation from celestial sources. The course also covers exciting contemporary topics such as black holes, the expansion of the universe and the search for extra-terrestrial life. Although largely descriptive, the course will occasionally require the use of junior high level math. This course has a lecture AND lab component. This course is intended for non-science majors: no science background is necessary. CSE students should take Ast 1011H.
Style: 50% Lecture, 10% Discussion, 40% Laboratory.
Grading: 32% mid exam, 30% final exam, 14% special projects, 24% laboratory evaluation.
Exam Format: A possible combination of multiple-choice, essay and/or short answer questions.
universe and the search for extraterrestrial life. Although largely descriptive, the course will occasionally require the use of junior-high level mathematics. Lectures are two days a week. This course is intended for non-science majors; no science background is necessary. CSE students should take AST 1011H. Course meets concurrently with the evening section of AST 1001.

**AST 1011H Exploring the Universe, Honors**  
A-F only, 4 credit(s); prereq High school trigonometry, [high school physics or chemistry]; Credit will not be granted if credit has been received for: AST 1001; Meets CLE req of Environment; meets CLE req of Physical Sciences;  
**Instructor:** Woodward, Paul R  
**Description:** This is the honors version (more mathematical) of AST 1001, which is our introductory course in Astronomy and Astrophysics. This course is a scientific exploration of the human place in the universe. We study the origin and history of the universe and the formation of the Earth and the solar system. We compare how the study of the heavens has influence human thought and action. This course includes study of the properties of light and matter and the tools astronomers use to measure radiation from celestial sources. The course also covers exciting contemporary topics such as black holes, the expansion of the universe and the search for extraterrestrial life. Although largely descriptive, the course will occasionally require the use of junior high level mathematics. This course has both a lecture AND lab component.  
**Style:** 50% Lecture, 40% Laboratory.  
**Grading:** 32% mid exam, 30% final exam, 14% special projects, 24% laboratory evaluation.  
**Exam Format:** A possible combination of multiple-choice, short-answer and/or essay questions.

**AST 1905 Freshman Seminar: The Accidental Universe**  
2 credit(s); prereq freshman;  
**Instructor:** Williams, Liliya L R  
**Description:** Sitting in a garden on a beautiful summer day, one may think that the Earth is so perfect, that it must have been created just for us. Obviously the conditions of our home planet are well suited for our habitation, but are we unique in that? Are there many such "gardens" planets around other stars? Making the query broader one can ask, is the universe as a whole tuned to accommodate intelligent life? Aside from liquid water and energy from the Sun, are there other, more global conditions that had to be satisfied on the cosmic scale for life to emerge and flourish? We will examine these fascinating questions in the seminar, and ask ourselves if unique answers are even possible.  
**Style:** 20% Lecture, 60% Discussion, 10% Small Group Activities, 10% Student Presentation.  
**Exam Format:** 10% reports/papers, 20% special projects, 20% in-class presentation, 50% class participation.

**AST 2001 Introduction to Astrophysics**  
4 credit(s); prereq [One yr calculus, PHYS 1302] or instr consent;  
**Instructor:** Gehrz, Robert Douglas  
**Description:** This is an introductory course for astronomy and astrophysics majors. You will be introduced to a broad range of topics in modern astrophysics, with an emphasis on how we measure astrophysical quantities and how we learn what these observations tell us about the physics of the universe. By the end of this class you will have a much greater facility with elementary theoretical calculations and making the kind of order of magnitude estimates that often guide work of scientists and engineers. The ultimate objective of the course is to give you the basic tools that you will need to read the current literature on astrophysics with a basic level of understanding.  
**Style:** 50% Lecture, 20% Film/Video, 15% Discussion, 15% Demonstration.  
**Grading:** 40% mid exam, 30% final exam, 30% problem solving.  
**Exam Format:** Short answer and/or essay.

**AST 4299H Senior Honors Astrophysics Research Seminar**  
1 credit(s), max credits 2, 1 completion allowed; prereq upper div honors student in IT or CLA, instr consent;  
**Instructor:** STAFF  
**Description:** An honors opportunity for upper division astronomy and astrophysics majors in the honors program. Based on our departmental research. Students are expected to attend weekly department seminars where current research is described. They will be asked to write short reports 2/3 of the talks during the semester.  
**Style:** 100% Lecture.  
**Grading:** 100% reports/papers.

**AST 4994W Directed Research**  
3-5 credit(s), max credits 5, 1 completion allowed; prereq instr consent;  
**Instructor:** STAFF  
**Description:** Independent research in observational and theoretical astrophysics. Arrange with a faculty member.

**AST 5701 Advanced Research**  
1 credit(s), max credits 2, 1 completion allowed; prereq 1 yr calculus, PHYS 1302; instr consent;  
**Instructor:** Skillman, Evan D  
**Description:** Student may contact the instructor or department for information.

**AST 5751 Observational Research**  
2001, instr consent;  
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1 credit has been received for: AST 1001; Meets CLE req of Environment; meets CLE req of Physical Sciences;  
**Instructor:** Woodward, Paul R  
**Description:** Independent, directed study in observational and theoretical astrophysics. Arrange with a faculty member.

**AST 6001 Astrophysics I**  
A-F only, 4 credit(s); prereq 2001, Phys 2601;  
**Instructor:** Heger, Alexander  
**Description:** Student may contact the instructor or department for information.

**AST 6200 Astrophysics Seminar**  
1-3 credit(s), max credits 3, 1 completion allowed; prereq instr consent;  
**Instructor:** Skillman, Evan D  
**Description:** Student may contact the instructor or department for information.

**AST 8200 Astrophysics Seminar**  
1-3 credit(s), max credits 3, 1 completion allowed; prereq instr consent;  
**Instructor:** Skillman, Evan D  
**Description:** Student may contact the instructor or department for information.
BIOC 1010 Human Health and Disease
3 credit(s);
Instructor: Siliciano, Paul G
Description: BioC 1010 provides an introduction to the molecular basis of common human diseases. Beginning with a description of the human genome, the course introduces the fundamental concepts of cellular and molecular biology, biochemical reactions, and the biochemical underpinnings of health and disease. Topics to be presented include Inherited Diseases (cystic fibrosis, hemophilia, sickle cell anemia, muscular dystrophy), Metabolic Diseases (diabetes, cardiovascular disease, hypertension, asthma, alcoholism), and Aging (osteoporosis, menopause, Alzheimer’s and other neurodegenerative diseases). Also included are the most common methods to diagnose, treat and prevent disease, including discussion of gene therapy, regenerative medicine (stem cells), and traditional drug-based interventions. Several class periods will be devoted to discussions of case studies (patients with particular diseases). We will also discuss social impact of individual diseases. The goal of the course is to familiarize students with the molecular basis for different types of diseases and treatments. Student Learning Outcomes: Following successful completion of this course, each student should be capable of scholarly discussions of the following topics: the general principles of the biochemistry and the function of the various classes of biomolecules, chemical processes that occur in the human body, the molecular basis of diseases and their treatments, examples of the impact of biochemistry on today’s society effectively communicate biochemical information in oral and written form. In addition, students should develop a sophisticated, portable biochemistry knowledge that they can use long after to course ends to; explain to their grandparents why their doctor recommends low dose aspirin explain to their parents how their cholesterol medication works evaluate their doctor’s recommendations for dietary changes clarify their cholesterol medication side effects for information.

BIOC 2011 Biochemistry I: Structure, Catalysis, and Metabolism in Biological Systems
4 credit(s); prereq [BIOL 2003 or BIOL 1002 or BIOL 1009], CHEM 2301, or instr consent; Credit will not be granted if credit has been received for: BIOC 6021;
Instructor: Laporte, David C
Description: The course will provide laboratory training in the theory and practice of modern biochemical techniques including buffers and pH, protein (lactate dehydrogenase) purification, protein electrophoresis, enzyme characterization using kinetics and immunochemical methods, recombinant DNA techniques.
Grading: 25% Lecture, 25% Discussion, 25% Small Group Activities.
Exam Format: No Exam

BIOC 3021 Biochemistry
3 credit(s); prereq [BIOL 2003 or BIOL 1002 or BIOL 1009], or instr consent; Credit will not be granted if credit has been received for: BIOC 6021;
Instructor: Schottel, Janet L
Description: Student may contact the instructor or department for information.

BIOC 3030 Research Topics in Biochemistry
S-N only, 1 credit(s), max credits 2; prereq 3021 or concurrent enrollment in 3021 or 4331 concurrent enrollment in 4331 or instructor consent;
Instructor: Laporte, David C
Description: The goal of Research Topics in Biochemistry is to expose students to a wide variety of cutting-edge research projects. The course will begin with a two-lecture introduction covering how to read scientific papers and the basic concepts of experimental design and analysis. Faculty from the BMBB Department will then give a series of presentations on cutting edge research. Each faculty member will give two presentations. The first will be a broad overview of a research area and the second will focus on a specific paper, dissecting all or part of it in detail.
Style: 50% Lecture, 25% Discussion, 25% Small Group Activities.
Grading: 50% written homework, 50% attendance.
Exam Format: short answer and problems

BIOC 4025 Laboratory in Biochemistry
2 credit(s); prereq 3021 or 4331 or equiv;
Instructor: Lange, Alex John
Description: Theory and practice of modern biochemical techniques including buffers and pH, protein (lactate dehydrogenase) purification, protein electrophoresis, enzyme characterization using kinetics and immunochemical methods, recombinant DNA techniques.
Grading: 33% mid exam, 34% final exam, 33% quizzes.
Exam Format: short answer and problems

BIOC 4125 Laboratory in Molecular Biology and Biotechnology
A-F only, 3 credit(s); prereq [3021 or Biol 3021 or or Biol 4003], [4025 or GCD 4015 or GCD 4025 or MicB 3301]; Credit will not be granted if credit has been received for: BIOL 4125;
Instructor: Das, Anath
Description: The course will provide laboratory training in the methods commonly used in molecular biology laboratories in academia and industry. Techniques that will be learned include: cloning and analysis of DNA, DNA sequencing, DNA and protein sequence analysis using databases, PCR amplification of DNA, site-specific mutagenesis, and expression and analysis of recombinant proteins.
Style: 20% Lecture, 80% Laboratory.
Grading: 40% reports/papers, 40% quizzes, 20% class participation.
Exam Format: Written and Problem Solving

BIOC 4125 Laboratory in Molecular Biology and Biotechnology
A-F only, 3 credit(s); prereq [3021 or Biol 3021 or or Biol 4003], [4025 or GCD 4015 or GCD 4025 or MicB 3301]; Credit will not be granted if credit has been received for: BIOL 4125;
Instructor: Das, Anath
Description: The course will provide laboratory training in the methods commonly used in molecular biology laboratories in academia and industry. Techniques that will be learned include: cloning and analysis of DNA, DNA sequencing, DNA and protein sequence analysis using databases, PCR amplification of DNA, site-specific mutagenesis, and expression and analysis of recombinant proteins.
Style: 20% Lecture, 80% Laboratory.
Grading: 40% reports/papers, 40% quizzes, 20% class participation.
Exam Format: Written and Problem Solving

BIOC 4331 Biochemistry I: Structure, Catalysis, and Metabolism in Biological Systems
4 credit(s); prereq [BIOL 1002 or BIOL 1009 or BIOL 2003 or CHEM 2301], or instr consent;
Instructor: Roon, Robert J
Description: Student may contact the instructor or department for information.
BIOC 4332 Biochemistry II: Molecular Mechanisms of Signal Transduction and Gene Expression
4 credit(s); prereq 4331 or instr consent;
Instructor: Towle, Howard
Description: Bio 4332 covers fundamental molecular biology and signal transduction. The course begins with the molecules and processes by which cells store, replicate, repair, and express genetic information in the form of DNA, RNA, and proteins. The latter part of the course describes regulatory processes that involve control of gene expression and mechanisms of signal transduction. The emphasis in the course is on the biochemical basis of gene function and biological regulatory processes. This course is designed for upper division undergraduates in the biological sciences, as well as beginning graduate students in other biological programs. Textbook: Molecular Biology of the Cell by Alberts et al., Garland Science, Fourth Edition (2002)
Style: 90% Lecture, 10% Discussion.
Grading: 80% mid exam, 20% final exam.
Exam Format: Exams will have both short answer (multiple choice, fill-in-the-blank) questions (approx 30-40%) and longer answer formats requiring you to explain and diagram concepts.

BIOC 4521 Introduction to Physical Biochemistry
3 credit(s); prereq CHEM 1022, MATH 1272, PHYS 1202; 4331 recommended;
Instructor: Mayo, Kevin Henry
Description: The objective of this course is to introduce and develop the concepts of physical chemistry that are most important for biochemistry. Desired outcomes are for students to develop a basic understanding of how thermodynamics, kinetics, spectroscopy, and solution dynamics can be applied to biochemical problems, and to provide a background for those students who wish to pursue further study in physical biochemistry.
Style: 100% Lecture.
Grading: There are four exams, each worth 20%. In addition, 20% of the grade is determined by homeworks and class participation, including attendance.
Exam Format: problem solving

BIOC 4793W Directed Studies: Writing Intensive
S-N only, 1-7 credit(s), max credits 7, 7 completions allowed; prereq instr consent, dept consent; Meets CLE req of Writing Intensive;
Instructor: STAFF
Description: Individual study on selected topics of problems. Emphasizes readings, use of scientific literature. Writing Intensive.

BIOC 4794W Directed Research: Writing Intensive
S-N only, 1 credit(s); prereq [[One organic chemistry or equiv], [CHEM 2302 or equiv]] or instr consent;
biochemistry course], [two calculus or college physics courses]] or instr approval;
Instructor: Ohlendorf, Douglas Henry
Description: This discussion/seminar course is the first of a two-semester sequence on the topic of Macromolecular Crystallography, the technique by which the complete three-dimensional structure of molecules can be determined. Both courses can only be taken S/N, with grading based primarily upon participation. Where appropriate, classes go into the laboratory to inspect the equipment and to observe experiments in progress. The main text for these courses is “X-ray Structure Determination: A Practical Guide” by G.H. Stout and L.H. Jensen. Minimum prerequisite is one year of chemistry or biology and mathematics through vector algebra and calculus.
Style: 60% Lecture, 40% Discussion. Homework and working examples on board.
Grading: 100% laboratory evaluation.
Exam Format: No exam

BIOC 6011 Biochemistry for Dental Students
A-F only, 4 credit(s); prereq Dental student;
Instructor: Bielinsky, Anja K
Description: COURSE OBJECTIVES To understand the molecular components of biochemistry Students should understand the building blocks (amino acids, lipids, carbohydrates, and nucleotides) and their assembly into proteins, membranes, RNA and DNA. The shape of a protein determines its function, and variables altering protein structure should be remembered and understood. To understand energy concepts in biochemistry Energy in biochemistry can exist as a pH gradient, an electrochemical gradient, a reduced organic molecule or a molecule with high group transfer potential. Students should recognize how these different types of energy can be formed, used and interconverted. To understand catalysis in biochemistry Catalysis makes reactions occur more quickly, but does not change whether they are favorable or not. Catalysis involves enzymes and often cofactor, which are usually derived from vitamins. Catalysis is regulated using several strategies. To understand how energy is generated in biochemistry Students should understand how biochemistry can use glucose to generate energy both with and without oxygen. Students should recognize that anaerobic fermentation of glucose to lactic acid is the source of acid that causes tooth decay. Students should know the pathways of glycolysis, citric acid cycle and oxidative phosphorylation. To understand how energy can be stored in biochemistry Students should understand how energy can be stored as sugars or fats. Students should know the pathways of gluconeogenesis and acid oxidation and their regulation. Students should understand basic concepts of molecular biology Students should know the structure and composition of DNA and RNA. They should be familiar with DNA metabolism (replication, repair, recombination), the genetic code, basic concepts of gene expression and translational control. Students should also understand how defects in DNA metabolism contribute to cancer. To understand the modern ramifications of molecular biology and recombinant DNA technology as they apply to human health and dentistry in particular Students should be familiar with basic cloning techniques and new technologies, such as genetic profiling that will likely be part of daily practice in the foreseeable future. They will also be exposed to the basic principles of stem cell technology. To understand basic concepts of signal transduction Students should understand how external stimuli are translated into molecular action. Students will be exposed to examples that are relevant to human health and their profession (e.g., signal transduction in B- and T-cell activation).
Style: 80% Lecture, 15% Discussion, 5% Guest Speakers.

BIOC 6021 Biochemistry
3 credit(s); prereq general biology, organic chemistry, instr consent ; intended for MBS students; Credit will not be granted if credit has been received for: BIOC 3021;
Instructor: Roon, Robert J
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit “Class URL” for ODL policy, fee, and financial aid information. This course is a one-semester survey of the fundamentals of biochemistry and is part of the core curriculum required for a Biology major in the College of Biological Sciences. The objective of this course is to provide a foundation for understanding the chemistry of biological systems, i.e., to prepare the student to comprehend the composition of living cells and their physiological processes at the molecular level. Lectures consider the structure and function of proteins, nucleic acids, lipids, and carbohydrates; principles of acid-base equilibria, enzyme catalysis and bioenergetics; fundamental metabolic pathways, and the chemical nature of genetic information storage and expression. The prerequisite reflects the strong emphasis on facility with organic chemistry. This course requires regular study effort on the part of the student. Students who plan to major in biochemistry should enroll in the alternate two-semester series, BioC 4331 and BioC 4332. Text: “Principles of Biochemistry with a Human Focus”, Garrett and Grisham, Harcourt College Publishers, 2001.
Style: Online with handwritten exams
Grading: 75% mid exam, 25% final exam.
Exam Format: Handwritten. Short answer, write structures, multiple choice, solve problems, short essays

BIOC 6021 Biochemistry
3 credit(s); prereq general biology, organic chemistry, instr consent ; intended for MBS students; Credit will not be granted if credit has been received for: BIOC 3021;
Instructor: Bielinsky, Anja K
Description: This is a one-semester survey of the fundamentals of biochemistry and is part of the core curriculum required for a Biology major in the College of Biological Sciences. The objective of this course is to provide a foundation for understanding the chemistry of biological systems, i.e., to prepare the student to comprehend the composition of living cells and their physiological processes at the molecular level. Lectures consider the structure and function of proteins, nucleic acids, lipids, and carbohydrates; principles of acid-base equilibria, enzyme catalysis and bioenergetics; fundamental metabolic pathways, and the chemical nature of genetic information storage and expression. The prerequisite reflects the strong emphasis on facility with organic chemistry. This course requires regular study effort on the part of the student. Students who plan to major in biochemistry should enroll in the alternate two-semester series, BioC 4331 and BioC 4332. Text: “Principles of Biochemistry with a Human Focus”, Garrett and Grisham, Harcourt College Publishers, 2001.
Style: Online with handwritten exams
Grading: 75% mid exam, 25% final exam.
Exam Format: Handwritten. Short answer, write structures, multiple choice, solve problems, short essays

BIOC 6021 Biochemistry
3 credit(s); prereq general biology, organic chemistry, instr consent ; intended for MBS students; Credit will not be granted if credit has been received for: BIOC 3021;
Instructor: Laporte, David C
Description: This course is a one-semester survey of the fundamentals of biochemistry and is part of the core curriculum required for a Biology major in the College of Biological Sciences. The objective of this course is to provide a foundation for understanding the chemistry of biological systems, i.e., to prepare the student to comprehend the composition of living cells and their physiological processes at the molecular level. Lectures consider the structure and function of proteins, nucleic acids, lipids, and carbohydrates; principles of acid-base equilibria, enzyme catalysis and bioenergetics; fundamental metabolic pathways, and the chemical nature of genetic information storage and expression. The prerequisite reflects the strong emphasis on facility with organic chemistry. This course requires regular study effort on the part of the student. Students who plan to major in biochemistry should enroll in the alternate two-semester series, BioC 4331 and BioC 4332. Text: “Principles of Biochemistry with a Human Focus”, Garrett and Grisham, Harcourt College Publishers, 2001.
Style: 100% Lecture
Grading: 75% mid exam, 25% final exam.
Exam Format: Short answer, write structures, multiple choice, solve problems, short essays

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
BIOC 8001 Biochemistry: Structure, Catalysis, and Metabolism 3 credit(s); prereq BMBB or MCDB&B grad student or instr consent; 
Instructor: Ohlendorf, Douglas Henry 
Description: BioC 8001 is one of three core classes for first year students of the MCSB umbrella graduate program. The mission assignment for these courses is summarized in three abbreviated points: 1) Courses will be designed to provide essential background? particularly for those who are not majoring in the area of the course. 2) The Courses will be taught at the level of a first year graduate course (not an upper division undergraduate course). 3) Courses will consist primarily of lectures based on graduate level textbooks?(and) will not be primarily literature-based? (Material can be) supplemented with literature sources. Within these guidelines, BioC 8001 was assigned to cover enzyme kinetics, structure, catalysis, metabolism and bioenergetics. The point of reference used to define a graduate level knowledge is the textbook by Voet and Voet, Edition 3. A few lectures on important related topics have been added to enhance understanding of some cutting edge issues in these areas. The first 14 class periods are given by Dr. Nelsestuen and cover biocatalysis and metabolic inter-conversions in biology with considerable discussion of thermodynamics in metabolism. The next 20 class periods are given by Dr. Ohlendorf and focus on structure and interactions of biological macromolecules as well as enzyme kinetics. The last 8 class periods and final exam are by Dr. Nelsestuen and deal with a mixture of topics including bioenergetics of metabolism, metabolic regulation by hormonal action and the effect of cellular crowding and cell structures on specific pathways and regulation events.

BIOC 8002 Molecular Biology and Regulation of Biological Processes 3 credit(s); prereq [BMBB or MCDBB] Concurrent registration is required (or allowed) in G] grad student or instr consent; 
Instructor: Conklin, Kathleen F 
Description: Student may contact the instructor or department for information.

BIOC 8084 Research and Literature Reports S-N only, 1 credit(s), max credits 5, 5 completions allowed; prereq Grad BMBB major or instr consent; 
Instructor: Hendrickson, Eric A 
Description: Student may contact DGS for information. This "course" is actually participation in the graduate student seminar series. Enrolled students are expected to attend the Tuesday 11:20-12:20 graduate student seminars.

BIOC 8084 Research and Literature Reports S-N only, 1 credit(s), max credits 5, 5 completions allowed; prereq Grad BMBB major or instr consent; 
Instructor: Khodursky, Arkady B 
Description: Student may contact DGS for information

BIOC 8184 Graduate Seminar S-N only, 1 credit(s), max credits 5, 5 completions allowed; prereq grad BMBB major or DGS consent; 
Instructor: Lipscomb, John D 
Description: Student may contact DGS for information

BIOC 8184 Graduate Seminar S-N only, 1 credit(s), max credits 5, 5 completions allowed; prereq grad BMBB major or DGS consent; 
Instructor: Das, Anath 
Description: Student may contact DGS for information

BIOC 8213 Selected Topics in Molecular Biology 4 credit(s); prereq 8002 or instr consent; Credit will not be granted if credit has been received for: GCD 8213; 
Instructor: Hendrickson, Eric A 
Description: This course is officially called topics in Molecular Biology. This is deceptive, however. In fact, this is a writing course. This course is designed for 1st year graduate students.

BIOC 8184 Graduate Seminar S-N only, 1 credit(s), max credits 5, 5 completions allowed; prereq grad BMBB major or DGS consent; 
Instructor: Das, Anath 
Description: Student may contact DGS for information

BIOC 8213 Selected Topics in Molecular Biology 4 credit(s); prereq 8002 or instr consent; Credit will not be granted if credit has been received for: GCD 8213; 
Instructor: Hendrickson, Eric A 
Description: This course is officially called topics in Molecular Biology. This is deceptive, however. In fact, this is a writing course. This course is designed for 1st year graduate students.

BTHX 5100 Introduction to Clinical Ethics 3 credit(s); prereq Jr or sr or grad student or instr consent; 
Instructor: Marshall, Mary Faith 
Description: Clinical ethics concerns the identification, analysis, and resolution of ethical problems that arise in planning for the care of patients. This course deals with the ethical problems that occur frequently in the clinical setting. The course emphasizes the ethical responsibilities of multidisciplinary health care professionals in planning for the care of their patients, and the skills and knowledge needed by ethics consultants in assisting those professionals to resolve ethical problems. The course is practical, teaching knowledge and skills such as obtaining informed consent, assessing decisional capacity, forgoing life-sustaining treatment, and dealing with refusals of treatment by patients and health care professionals.

BTHX 5010 Bioethics Proseminar A-F only, 2 credit(s); prereq Bioethics grad student or grad minor; 
Instructor: DeBruin, Debra Ann 
Description: An introduction to topics in bioethics, with enrollment limited to Bioethics graduate students, including graduate minors. Course objectives: The Proseminar serves to: (1) familiarize Bioethics graduate students with the wide range of topics that they may wish to pursue in their scholarship and eventual careers; (2) showcase faculty affiliated with the program in order to acquaint students with their research and assist students in locating potential mentors and advisors; and (3) give Bioethics graduate students a class cohort, to foster community among them.

BTHX 5000 Topics in Bioethics: Ethics in Complex Health Care Organizations 1-4 credit(s), max credits 8; prereq Grad student or instr consent; 
Instructor: Mickelsen, Ruth Ann 
Description: Topic-specific seminars in bioethics, with enrollment limited to Bioethics graduate students, including graduate minors. Course objectives: The Seminar is tailored to students wishing to incorporate work in bioethics into their career plans. It provides an overview of research methods, and discusses career publication strategies, authorship issues, ethics in publication, and peer review.
BTHX 5900 Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent ;
Instructor: Elliott Jr, Bruce Carleton
Description: Student may contact the instructor or department for information.

BTHX 5900 Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent ;
Instructor: Kahn, Jeffrey P
Description: Student may contact the instructor or department for information.

BTHX 5900 Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent ;
Instructor: DeBruin PhD, Debra Ann
Description: Student may contact the instructor or department for information.

BTHX 5900 Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent ;
Instructor: Liaschenko, Joan
Description: Student may contact the instructor or department for information.

BTHX 5900 Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent ;
Instructor: Marshall, Mary Faith
Description: Student may contact the instructor or department for information.

BTHX 5900 Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent ;
Instructor: Turner, Leigh
Description: Student may contact the instructor or department for information.

BTHX 8500 Practicum in Bioethics
OPT No Aud, 1-3 credit(s), max credits 12, 4 completions allowed; prereq Bioethics grad [major or minor] or instr consent ;
Instructor: Elliott Jr, Bruce Carleton
Description: Student may contact the instructor or department for information.

BTHX 8500 Practicum in Bioethics
OPT No Aud, 1-3 credit(s), max credits 12, 4 completions allowed; prereq Bioethics grad [major or minor] or instr consent ;
Instructor: Kahn, Jeffrey P
Description: Student may contact the instructor or department for information.

BTHX 8500 Practicum in Bioethics
OPT No Aud, 1-3 credit(s), max credits 12, 4 completions allowed; prereq Bioethics grad [major or minor] or instr consent ;
Instructor: Wolf, Susan M
Description: Student may contact the instructor or department for information.

BTHX 8500 Practicum in Bioethics
OPT No Aud, 1-3 credit(s), max credits 12, 4 completions allowed; prereq Bioethics grad [major or minor] or instr consent ;
Instructor: Miles MD, Steven Haverstock
Description: Student may contact the instructor or department for information.

BTHX 8500 Practicum in Bioethics
OPT No Aud, 1-3 credit(s), max credits 12, 4 completions allowed; prereq Bioethics grad [major or minor] or instr consent ;
Instructor: Marshall, Mary Faith
Description: Student may contact the instructor or department for information.

BTHX 8500 Practicum in Bioethics
OPT No Aud, 1-3 credit(s), max credits 12, 4 completions allowed; prereq Bioethics grad [major or minor] or instr consent ;
Instructor: Turner, Leigh
Description: Student may contact the instructor or department for information.

BTHX 8900 Advanced Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent ;
Instructor: Miles MD, Steven Haverstock
Description: Students propose area for advanced individual study with faculty guidance. Students write proposal, which includes outcome objectives and work plan. Faculty member directs student's work and evaluates project.

BTHX 8900 Advanced Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent ;
Instructor: Bartels, Dianne Mary

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BTHX 8900 Advanced Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent;
Instructor: Song, John Young
Description: Students propose area for advanced individual study with faculty guidance. Students write proposal, which includes outcome objectives and work plan. Faculty member directs student's work and evaluates project.

BTHX 8900 Advanced Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent;
Instructor: Wolf, Susan M
Description: Students propose area for advanced individual study with faculty guidance. Students write proposal, which includes outcome objectives and work plan. Faculty member directs student's work and evaluates project.

BTHX 8900 Advanced Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent;
Instructor: Liaschenko, Joan
Description: Students propose area for advanced individual study with faculty guidance. Students write proposal, which includes outcome objectives and work plan. Faculty member directs student's work and evaluates project.

BTHX 8900 Advanced Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent;
Instructor: Valapour, Maryam
Description: Students may contact the instructor or department for information.

BTHX 8900 Advanced Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent;
Instructor: Marshall, Mary Faith
Description: Students propose area for advanced individual study with faculty guidance. Students write proposal, which includes outcome objectives and work plan. Faculty member directs student's work and evaluates project.

BTHX 8900 Advanced Independent Study in Bioethics
1-4 credit(s), max credits 8; prereq instr consent;
Instructor: Turner, Leigh
Description: Students propose area for advanced individual study with faculty guidance. Students write proposal, which includes outcome objectives and work plan. Faculty member directs student's work and evaluates project.

BINF 5480 Bioinformatics Journal Club
S-N only, 1 credit(s), max credits 12, 6 completions allowed;
Instructor: Ellis, Lynda B
Description: An independent study project class offered by members of the Graduate Faculty in Bioinformatics. Projects, number of credits, and grading system are determined by mutual agreement between the faculty member and student. Not all faculty have time and appropriate projects in any given semester. Students should check faculty research interests on the BI faculty web page, and contact faculty they are interested in working with individually to check on the availability of instructor and projects, before registering for this class.
Style: As arranged
Grading: As arranged

BIOL 1001 Introductory Biology: Evolutionary and Ecological Perspectives
4 credit(s); Credit will not be granted if credit has been received for: BIOL 1001H; Meets CLE req of Biological Sciences;
Instructor: STAFF
Description: BIOL 1001, INTRODUCTORY BIOLOGY: EVOLUTIONARY AND ECOLOGICAL PERSPECTIVES introduces the discipline of biological science by focusing on the fundamental concept underlying all of biology-biological evolution. The course examines the mechanisms of evolution, the genetics underlying the process of heredity and evolutionary change (both within populations and as new species arise), and the historical context and social implications of the theory of evolution. You will learn about the evolutionary history of life on Earth (including the evolution of humans), sexual selection, and the evolution of behavior. We will also explore how evolution affects your life. At the end of the course, these concepts are put into the context of population, community, and ecosystem ecology, and conservation biology.
Style: 65% Lecture, 35% Laboratory.
Grading: 33% mid exam, 25% final exam, 15% reports/papers, 16% quizzes, 4% in-class presentation, 7% problem solving. homework
Exam Format: multiple choice lecture exams

BIOL 1003 Evolution and Biology of Sex
4 credit(s); Credit will not be granted if credit has been received for: BIOL 1001; Meets CLE req of Biological Sciences;
Instructor: Decker, Mark David
Description: Student may contact the instructor or department for information.
BIOL 1009 General Biology
4 credit(s); prerequisite high school chemistry; 1 term college chemistry recommended; Credit will not be granted if credit has been received for: BIOL 1009; Meets CLE req of Biological Sciences;
Instructor: Brooker, Robert James
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. The course focuses on four fields of biology: cell biology, genetics, evolution, and ecology. The course is divided into 13 lessons. Three of these lessons (lessons 4, 8, and 13) are exams. The other 10 lessons focus on topics in biology. Each of these 10 lessons covers two or three chapters in your textbook. You will also view online lectures that cover these chapters. For each lesson, you will turn in a homework assignment online, which will grade and return to you. You will also take a quiz to see if you have a good understanding of the material.
Style: Online with handwritten exams
Grading: 40% mid exam, 24% final exam, 10% quizzes, 10% written homework, 16% laboratory evaluation.
Exam Format: Supervised, in-person (not online) exams.

BIOL 1010 Human Biology: Concepts and Current Ethical Issues
A-F only, 4 credit(s); Meets CLE req of Biological Sciences; meets CLE req of Civic Life and Ethics;
Instructor: Palmer, Melissa L
Description: BIOL 1010, HUMAN BIOLOGY, a brand new course, looks at the human body and current issues concerning this marvelous structure, e.g., cells, organs, physiology of organ systems, ethics, and considers some aspects of human impacts on the environment. Its weekly debates include: Should we as a society use human stem cells for therapy? Is obesity overrated? What are the promises and perils of genetic testing? Should we clone humans? Voluntary breast removal to prevent cancer? Could you do it? The laboratory includes opportunities to learn about and measure the functions of the human body. In addition, in order to more effectively understand human biological processes, animal dissections are required. Special attention is placed upon mammalian anatomy through dissection of the fetal pig.

BIOL 1050 Our Global Environment: Science and Solutions
A-F only, 3 credit(s); Meets CLE req of Environment;
Instructor: Wassenberg, Deena Marie
Description: What are environmentally sound food choices? Is global warming a conspiracy? Are pesticides turning male frogs into females? These and other questions are explored in Biology 1050. Our Global Environment: Science and Solutions. This course meets the CLE ENV theme, has no prerequisites and is appropriate for individuals with some high school science background. We will focus on approaching environmental problems as scientists. This course will approach the topics of biodiversity, environmental toxicology, food choices and global climate change, concentrating on the skills of inquiry that can be applied to any scientific question. This means we will evaluate data and experimental design, we will propose experiments and we will learn to carefully consider sources of data. For more information contact Deena Wassenberg (deenaw@umn.edu)

BIOL 1093 Biology Colloquium: Directed Study
S-N only, 1 credit(s); prerequisite Biol 1020 and concurrent enrollment
Instructor: Hanna, Kathryn L
Description: This course allows students early in their studies to explore various biology disciplines through an independent project or beginning research experience under the supervision of a faculty sponsor. The Biology Colloquium Student Leaders will help you find the biology-related project that fits your interests and allows you to earn University credit as well as try out the world of research. To be eligible, students must have taken one previous Biology Colloquium class (Biol 1020) and also be concurrently enrolled in the Biology Colloquium (Biol 1020). Examples of previous projects include: work with anaerobic bacteria, helping with data analysis in the lion project, working on chemical carcinogenesis, fruit fly genetics, liver cell research, monarch butterfly research, and many, many other projects across the University.
Schedule.

**Course Guide at** [http://onestop.umn.edu](http://onestop.umn.edu). **IMPORTANT:** Before you attend the first class, verify the room location in the online Class University of Minnesota - Course Guide for Twin Cities Campus Fall 2011

**BIOL 1905 Freshman Seminar for the Biological Sciences:**

- **Title:** Freshman Seminar for the Biological Sciences
- **Description:** The purpose of this course is to introduce students to the field of biology and to equip them with the tools necessary to succeed in future biology courses. The seminar will cover a variety of topics, including the history of biology, the role of biology in society, and the ethical and environmental implications of biological research.
- **Instructor:** Decker, David
- **Prerequisites:** Freshman
- **Credits:** A-F only, 1-3 credit(s), max credits 6
- **Exams:** Mid exam, final exam
- **Grading:** 40% exam, 50% other evaluation
- **Style:** Lecture, Discussion

**BIOL 1905 Freshman Seminar for the Biological Sciences: Marine Physiology and Underwater Naturalist Sem**

- **Description:** This course will introduce students to the biology of marine life, focusing on the physiology of marine organisms and their adaptations to living in the aquatic environment. Students will also learn about the role of marine biologists in conducting research and conservation efforts.
- **Instructor:** Palmer, Melissa M
- **Prerequisites:** Freshman
- **Credits:** A-F only, 1-3 credit(s), max credits 6
- **Exams:** Mid exam, final exam
- **Grading:** 40% exam, 50% other evaluation
- **Style:** Lecture, Discussion

**BIOL 1905 Freshman Seminar for the Biological Sciences: Photographing the University Community**

- **Description:** This course will provide an introduction to the art of photography, focusing on the techniques and skills necessary to capture images of the University community. Students will learn about lighting, composition, and post-processing techniques.
- **Instructor:** Lange, Alex John
- **Prerequisites:** Freshman
- **Credits:** A-F only, 1-3 credit(s), max credits 6
- **Exams:** Mid exam, final exam
- **Grading:** 40% exam, 50% other evaluation
- **Style:** Lecture, Discussion

**BIOL 1905 Freshman Seminar for the Biological Sciences: Understanding Evolution-Creationism Controversy**

- **Description:** This course is designed to help students understand the scientific evidence supporting evolution and the religious arguments against it. The seminar will also cover the history of the controversy and its cultural implications.
- **Instructor:** Moore, Randy
- **Prerequisites:** Freshman
- **Credits:** A-F only, 1-3 credit(s), max credits 6
- **Exams:** Mid exam, final exam
- **Grading:** 40% exam, 50% other evaluation
- **Style:** Lecture, Discussion

**BIOL 1905 Freshman Seminar for the Biological Sciences: The Evolutionary Biology of You**

- **Description:** This course will explore the role of genetics in shaping human biology, focusing on topics such as genetic variations, genetic diseases, and genetic technologies.
- **Instructor:** Decker, Mark David
- **Prerequisites:** Freshman
- **Credits:** A-F only, 1-3 credit(s), max credits 6
- **Exams:** Mid exam, final exam
- **Grading:** 40% exam, 50% other evaluation
- **Style:** Lecture, Discussion

**BIOL 1905 Freshman Seminar for the Biological Sciences: Becoming a Reflective Leader**

- **Description:** This course is designed to help students develop their leadership skills through self-reflection and introspection. Students will learn about leadership theories and frameworks, and will practice applying them to real-world situations.
- **Instructor:** Stein, Meaghan
- **Prerequisites:** Freshman
- **Credits:** A-F only, 1-3 credit(s), max credits 6
- **Exams:** Mid exam, final exam
- **Grading:** 40% exam, 50% other evaluation
- **Style:** Lecture, Discussion

**BIOL 1905 Freshman Seminar for the Biological Sciences: Living Sustainably in Urban Ecosystems**

- **Description:** This course is designed to help students understand the role of human actions in shaping ecosystems, and to provide strategies for living sustainably in urban settings.
- **Instructor:** Hobbie, Sarah E
- **Prerequisites:** Freshman
- **Credits:** A-F only, 1-3 credit(s), max credits 6
- **Exams:** Mid exam, final exam
- **Grading:** 40% exam, 50% other evaluation
- **Style:** Lecture, Discussion

**BIOL 1905 Freshman Seminar for the Biological Sciences: The Nature of Life: Introducing New Students to the Biological Sciences;**

- **Description:** This course is designed to introduce new students to the field of biology, focusing on the fundamental concepts and principles that underlie biological science.
- **Instructor:** Kipper, Catherina J
- **Prerequisites:** Freshman
- **Credits:** A-F only, 1-3 credit(s), max credits 6
- **Exams:** Mid exam, final exam
- **Grading:** 40% exam, 50% other evaluation
- **Style:** Lecture, Discussion

**BIOL 1905 Freshman Seminar for the Biological Sciences: Evolution and Society**

- **Description:** This course will explore the role of biology in shaping society, focusing on topics such as biological evolution, social structures, and human behavior.
- **Instructor:** Curtis, James William
- **Prerequisites:** Freshman
- **Credits:** A-F only, 1-3 credit(s), max credits 6
- **Exams:** Mid exam, final exam
- **Grading:** 40% exam, 50% other evaluation
- **Style:** Lecture, Discussion

**BIOL 1905 Freshman Seminar for the Biological Sciences: Getting to Know Your Cup of Joe**

- **Description:** This course will explore the biology of coffee, focusing on the cultivation, processing, and consumption of coffee beans.
- **Instructor:** Pompei, Vanessa Duong
- **Prerequisites:** Freshman
- **Credits:** A-F only, 1-3 credit(s), max credits 6
- **Exams:** Mid exam, final exam
- **Grading:** 40% exam, 50% other evaluation
- **Style:** Lecture, Discussion

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evolution-creationism controversy - We'll discuss the many aspects of this controversy, including its history, legacy, relevance, and key people. We will also discuss a variety of issues related to the controversy, including those involving court decisions, public opinion, and related issues (e.g., racism, politics, etc.). Many people are emotional and opinionated about the evolution-creationism controversy. Although the focus of this course is not on opinions, we will talk about why so many people feel strongly about these issues, and why the controversy persists. You'll be interested in, and probably surprised by, what you learn.

BIOL 1905 Freshman Seminar for the Biological Sciences: Happy in Hell: Microbes Thriving at the Extremes
A-F only, 1-3 credit(s), max credits 6; prereq freshman;
Instructor: Bond, Daniel R
Description: It is a microbial world. Bacteria have adapted to life virtually everywhere on our planet. Bacteria and other microbes living in the wildest environments are commonly known as "extremophiles". Research in this area has led to several groundbreaking discoveries that have impacted biology in profound ways. This research is also driven by our fascination with life on other planets, and has rekindled the possibility that life may exist on nearby planets or moons (e.g. Mars or Europa). We will cover a variety of extreme environments, including; high and low temperature, high and low pH, dry, deep and other strange ecosystems, discuss how bacteria are able to thrive in such environments, and explore the feasibility of detecting life beyond Earth.

BIOL 2001 Career Planning for Biologists
S-N only, 1 credit(s);
Instructor: Underwood, Jean M
Description: This course leads you through the steps of career planning and decision making. You will assess your strengths, interests and values. You will learn how to research careers. You will learn about successful strategies for setting goals and making decisions. Not only will you learn about campus resources but you will attend and participate in campus activities. In addition to online discussions and assignments, you will have a required one-to-one meeting with the instructor
Style: 100% Web Based. One-to-one meeting with instructor is required. Time will be spent attending activities and events in addition to online component.
Grading: Points will be earned through the completion of required course activities.

BIOL 2002H Foundations of Biology for Biological Sciences Majors, Part I
A-F only, 6 credit(s); prereq [[CHEM 1021 or equiv], CBS major] or dept consent ; calculus I or equiv recommended; Credit will not be granted if credit has been received for:
BIOL 2002H; Meets CLE req of Biological Sciences;
Instructor: Decker, Mark David
Description: Biol 2002 is intended for majors in the College of Biological Sciences. It is the first of two foundational courses that cover core biological concepts, from biomolecules to ecosystems. This course emphasizes evolution, organismal diversity, and genetics within the context of problem solving and application. The lecture/recitation sections are integrated with laboratory exercises to give students basic experience with the methods of modern biology. Student participation is encouraged.
Style: 10% Lecture, 10% Discussion, 50% Laboratory, 30% Small Group Activities. This class is based on a team-based learning model.
Grading: 13% mid exam, 12% final exam, 15% special projects, 20% quizzes, 5% class participation, 35% laboratory evaluation. Projects and 25% of quiz grades are based on team efforts.

BIOL 2002H Foundations of Biology for Biological Sciences Majors, Part II
A-F only, 6 credit(s); prereq [CHEM 1021 or equiv, CBS major, honors student] or dept consent ; calculus I or equiv recommended; Credit will not be granted if credit has been received for:
BIOL 2002; Meets CLE req of Biological Sciences;
Instructor: Decker, Mark David
Description: Biol 2002 is intended for majors in the College of Biological Sciences. It is the first of two foundational courses that cover core biological concepts, from biomolecules to ecosystems. This course emphasizes evolution, organismal diversity, and genetics within the context of problem solving and application. The lecture/recitation sections are integrated with laboratory exercises to give students basic experience with the methods of modern biology. Student participation is encouraged.
Style: 10% Lecture, 10% Discussion, 50% Laboratory, 30% Small Group Activities. This class is based on a team-based learning model.
Grading: 13% mid exam, 12% final exam, 15% special projects, 20% quizzes, 5% class participation, 35% laboratory evaluation. Projects and 25% of quiz grades are based on team efforts.

BIOL 2003 Foundations of Biology for Biological Sciences Majors, Part II
A-F only, 3 credit(s); prereq [2002 or 2002H or CBS major], concurrent enrollment in Biol 2004 (must register for 2004 before 2003), [MATH 1271 or equiv]; Credit will not be granted if credit has been received for:
BIOL 2003H;
Instructor: Sterner, Robert Warner
Description: Student may contact the instructor or department for information.

BIOL 2003 Foundations of Biology for Biological Sciences Majors, Part II
A-F only, 3 credit(s); prerequisite [2002 or 2002H or CBS major], concurrent enrollment in BIOL 2004 (must register for 2004 before 2003), [MATH 1271 or equiv]; credit will not be granted if credit has been received for: BIOL 2003H; Instructor: Brooker, Robert James Description: BIOL 2003 is intended for majors in the College of Biological Sciences. It is the second of two foundational courses that cover core biological concepts, from biomolecules to ecosystems. This course emphasizes ecology and biochemistry within the context of problem solving and application. While students will meet regularly with instructors, they also will be responsible for scheduling their time in an open lab in order to complete their research project. At the end of this course, students will be qualified to enter a faculty research lab, internship, or other venue of active science.

BIOL 2003 Foundations of Biology for Biological Sciences Majors, Part II
A-F only, 3 credit(s); prerequisite [2002 or 2002H or CBS major], concurrent enrollment in BIOL 2004 (must register for 2004 before 2003), [MATH 1271 or equiv]; credit will not be granted if credit has been received for: BIOL 2003H; Instructor: Seabloom, Eric Description: BIOL 2003 is intended for majors in the College of Biological Sciences. It is the second of two foundational courses that cover core biological concepts, from biomolecules to ecosystems. This course emphasizes ecology and biochemistry within the context of problem solving and application. This second semester emphasizes application of quantitative skills, concepts, and tools to biological problems through independent research. While students will meet regularly with instructors, they also will be responsible for scheduling their time in an open lab in order to complete their research project. At the end of this course, students will be qualified to enter a faculty research lab, internship, or other venue of active science.

BIOL 2003H Foundations of Biology for Biological Sciences Majors, Part II
A-F only, 3 credit(s); prerequisite [2002 or 2002H], concurrent enrollment in BIOL 2004H (must register for 2004H before 2003H), [MATH 1271 or equiv], honors; credit will not be granted if credit has been received for: BIOL 2003; Instructor: Sterner, Robert Warner Description: student may contact the instructor or department for information.

BIOL 2004 Foundations of Biology for Biological Sciences Majors, Part II Laboratory
A-F only, 3 credit(s); prerequisite [2002 or 2002H or CBS major], concurrent enrollment in BIOL 2003 (must register for 2004 before 2003); credit will not be granted if credit has been received for: BIOL 2004H; Instructor: STAFF Description: Accompanies 2003. Students design and perform research projects. Relationship between biology and other sciences. Applying quantitative skills, scientific method, and modern biological tools to real-world questions.

BIOL 2004H Foundations of Biology for Biological Sciences Majors, Part II Laboratory
A-F only, 3 credit(s); prerequisite [2002 or 2002H], honors, concurrent enrollment in BIOL 2003H (must register for 2004H before 2003H); credit will not be granted if credit has been received for: BIOL 2004; Instructor: Kirkpatrick, Catherine Description: student may contact the instructor or department for information.

BIOL 2005 Animal Diversity Laboratory
2 credit(s); credit will not be granted if credit has been received for: BIOL 2012; Instructor: STAFF Description: This is a laboratory course and requires dissection and direct observation of animal diversity with emphasis upon morphology. The phylogenetic survey, from unicellular protists through the vertebrates, includes a wide array of organismal variation. Special attention is placed upon mammalian anatomy through dissection of the fetal pig. Students develop an understanding of the patterns and complexities of animal diversity through the experience of hands-on laboratory exercises. Style: 5% Discussion Lab, 95% Laboratory. Grading: 55% mid exam, 37% final exam, 8% quizzes. Exam Format: multiple choice/practical

BIOL 2012 General Zoology
4 credit(s); prerequisite one semester of college biology; credit will not be granted if credit has been received for: BIOL 2005; Instructor: Barker, Frederick K Description: the course provides a framework for understanding the major groups of animals (phyla) on Planet Earth, ranging from unicellular protozoa to arthropods and mammals and including their marine, freshwater, and terrestrial representatives. The phyla are traced through evolutionary time to see how they solved the common problems of existence (e.g., feeding, movement, respiration, reproduction) and how their solutions have given rise to changing levels of structural complexity. Video clips and slides are liberally used to illustrate aspects of behavior, ecology, and relevance to human well-being. The laboratory is an integral part of the course; activities are hands-on and require dissections. The course is designed for undergraduate students in liberal arts and natural sciences and for pre-professional students in health sciences, agriculture, and natural resources. Lecture exams are based largely on lecture content and review questions from the text. Laboratory tests are practicum exams quizzing knowledge of actual specimens. The lecture text is Hickman et al., Animal Diversity, (5th ed). The lab text is Smith and Schenk, Exploring Zoology A Laboratory Guide. Style: 73% Lecture, 27% Laboratory. Grading: 4 lecture exams; 4 lab exams Exam Format: Lecture exams require short answers based on specific knowledge of concepts presented in lecture

BIOL 2022 General Botany
A-F only, 3 credit(s); prerequisite one semester of college biology; Instructor: Ward, John M Description: Scientific principles of plant biology including the evolution, anatomy, physiology, growth and development, and reproductive biology of plants and plant-like organisms. Includes lab. Style: 60% Lecture, 40% Laboratory. Grading: 100% other evaluation. 60% lecture, 40% laboratory Exam Format: multiple choice
Biol 2331 Anatomy and Physiology I
A-F only, 4 credit(s); prereq Grade of at least C- in 2311 or placement test; Meets CLE req of Biological Sciences;
Instructor: Donnar, Robert Lee
Description: Student may contact the instructor or department for information.

Biol 2960H Explorations in the Biological Sciences: Honors Colloquium
A-F only, 1 credit(s); prereq honors program, soph, dept consent;
Instructor: Berman, Judith G
Description: Explorations in the Biological Sciences is designed to help students build skills in reading and interpreting primary research papers, presenting concepts, and writing scientific proposals. Students are matched with a faculty mentor to discuss their research, write a proposal according to Undergraduate Research Opportunities Program (UROP) guidelines, and participate in peer review through study sessions. Faculty and career professionals in the biological sciences serve as guest speakers who introduce students to avenues of research and careers.

Biol 3007W Plant, Algal, and Fungal Diversity and Adaptation 4 credit(s); prereq One semester college biology, CHEM 1021; Meets CLE req of Writing Intensive;
Instructor: Mc Laughlin, David J
Description: This course will introduce students in biology and the plant and environmental sciences to the evolution and diversity of plants and fungi, and to their adaptations to the environment. For each major group of algae, fungi, bryophytes and vascular plants, the following will be treated: ecosystem role; economic importance; morphology and anatomy, development and life cycles; and physiological adaptations including uptake and transport of nutrients, water movement, hormones, photosynthesis. The course will also provide an introduction to plant communities and ecosystems, and the interactions among organisms. The laboratory will provide a hands-on introduction to major groups of plants and fungi, emphasizing how structure and reproduction are adapted to habitat. The lab will also provide experience in formulating hypotheses, designing experiments and analyzing data. This course is writing intensive; therefore, a significant portion of your grade will be based on written work. You will write two papers that are based on experiments done in the lab, plus two summaries of scientific journal articles related to laboratory topics. You will also prepare two course overview essays that will help you integrate the topics covered in the class. Textbook: Raven, P.H., Evert, R.F., Eichhorn, S.E., 2005, Biology of Plants, 7th edition, W.H. Freeman & Company/Worth.
Style: 50% Lecture, 10% Discussion, 40% Laboratory.
Grading: 24% reports/papers, 34% written homework, 6% journal. 66% laboratory quiz scores, in class informal lecture summaries, mid exam, final exam. Two course overview essays (4%).
Exam Format: Short answers and essay questions.

Biol 3209 Understanding the Evolution-Creationism Controversy
A-F only, 3 credit(s); prereq 1001 or 1009 or 2002 or equiv; Meets CLE req of Civic Life and Ethics;
Instructor: Moore, Randy
Description: This course will help you develop your own understanding of the evolution-creationism controversy and, in the process, prepare you to understand how the controversy (and its associated civic and ethical issues) affects communities in their everyday lives. Although we will discuss the science underlying evolution, most of controversy is based not on science, but on social and civic issues. We'll examine how society has debated and otherwise dealt with the controversy, especially how 1) the controversy has developed in the past 150 years, and 2) how various ethical and civic issues have pervaded the controversy, and 3) how the controversy has been assessed by individuals, organizations, and communities, especially churches and politicians. Students will have many opportunities to apply their understanding to modern versions of the controversy (e.g., "intelligent design") through discussions, assignments, guest speakers, and mock trials. These activities will 1) encourage you to think about how this controversy affects various people, organizations, and communities, 2) help you reflect on the roles of common and powerful societal forces such as science and religious faith, and 3) help you integrate the often-overlapping roles of science, politics, religious faith, and other aspects of modern society. Taken together, these activities will help you acquire the interests, skills, and breadth of experiences to be an informed and engaged citizen. The course-lectures, discussions, activities, and assignments will challenge you to understand how the many ethical principles, beliefs, and attitudes of individuals and various social groups were developed, affect, and are affected by, the ethical and societal intersections of science, religion, politics, and education. A basic part of this understanding is an awareness of how ethics influence how individuals and groups determine what should be done with important, contentious issues and information. For example, what processes do stakeholders such as educators, churches, and politicians use to address issues that involve collisions between society and religion? Finally, this course will help you develop your own understanding and appreciation of the evolution-creationism controversy. We'll discuss the many aspects of this controversy, including its history, legacy, relevance, and key people. We will also discuss a variety of issues related to the controversy, including those involving court decisions, public opinion, and related issues (e.g., racism, politics, etc.). Many people are emotional and opinionated about the evolution-creationism controversy. Although the focus of this course is not on opinions, we will talk about why so many people feel strongly about these issues, and why the controversy persists. You'll be interested in, and probably surprised by, what you learn.

Biol 3211 Physiology of Humans and Other Animals 3 credit(s); prereq [1002 or 1009 or 2003 or equiv]; Meets CLE req of Physical Sciences;
Instructor: Palmer, Melissa L
Description: The main objective is understanding how animals carry out a variety of functions (e.g. respiration, movement). We will start by looking at some underlying general principles (e.g., diffusion, membrane voltages) and structures (e.g., membrane receptors) that will be useful in understanding how animals carry...
out these functions. We will then look at a number of problems faced by animals (e.g., the need for gas exchange) and the various systems animals use to solve these problems (e.g., gills, lungs). We will describe these systems at a variety of levels -- organismal, organ, tissue, cellular, and subcellular. There are two main goals of this course. One is to acquaint you with specific physiological systems. The other is to give you an overview that will help you visualize organisms in a way that integrates the various levels of organization. The hope is that, as you are introduced to more detailed descriptions of cellular and subcellular processes in later courses, you will see how these processes fit into the the entire organism.

**Style:** 100% Lecture.

**Grading:** 50% final exam, 50% other evaluation. midsemester exams (25% each)

**Exam Format:** multiple choice

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**BIOL 3211 Physiology of Humans and Other Animals**

3 credit(s); prerequisite: [1002 or 1009 or 2003 or equiv]. CHEM 1021; concurrent registration in 2005 is strongly recommended;

**Instructor:** Goldstein, Stuart F

**Description:** The main objective is understanding how animals carry out a variety of functions (e.g., respiration, movement). We will start by looking at some underlying general principles (e.g., diffusion, membrane voltages) and structures (e.g., membrane receptors) that will be useful in understanding how animals carry out these functions. We will then look at a number of problems faced by animals (e.g., the need for gas exchange) and the various systems animals use to solve these problems (e.g., gills, lungs). We will describe these systems at a variety of levels -- organismal, organ, tissue, cellular, and subcellular. There are two main goals of this course. One is to acquaint you with specific physiological systems. The other is to give you an overview that will help you visualize organisms in a way that integrates the various levels of organization. The hope is that, as you are introduced to more detailed descriptions of cellular and subcellular processes in later courses, you will see how these processes fit into the the entire organism.

**Style:** 100% Lecture. 3 hours/week lecture

**Grading:** 50% final exam, 50% other evaluation. midsemester exams (25% each)

**Exam Format:** multiple choice

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**BIOL 3272 Applied Biostatistics**

A-F only, 3 credit(s); prerequisite: High school algebra; 2003 recommended;

**Instructor:** Katagiri, Fumiaki

**Description:** Student may contact the instructor or department for information.

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**BIOL 3303 Peer Leadership Practicum**

S-N only, 1 credit(s), max credits 2; prerequisite: 1301, 2001, CBS dean's scholar;

**Instructor:** Stein, Meaghan

**Description:** Student may contact the instructor or department for information.

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**BIOL 3407 Ecology**

3 credit(s); prerequisite: [One semester college biology]. [MATH 1142 or MATH 1271 or MATH 1281 or equiv]; Credit will not be granted if credit has been received for: EEB 3001;

**Instructor:** Lehman, Clarence L

**Description:** Biology 3407 is presented as a series of lectures, discussion sections, and laboratory exercises. The goal of this course is to help you explore: the scientific principles, concepts and theories that are the foundation of ecology; how these are applied to major societal and scientific issues, including those related to human impacts on the functioning, productivity and sustainability of ecosystems at a global scale; and the process of scientific creativity, including hypothesis generation, the design of experiments and observation, critical evaluation of data, the inferences that can be drawn from data, and the implications of these inferences. Laboratory and discussion sections will be led by a teaching assistant (TA) from the Ecology Graduate Program. These sections will illustrate, amplify and explain ecological concepts. Your laboratory experience will include completion of an independent research project. Lecture material, assigned readings from the text, and the scientific papers discussed in both lecture and laboratory form the basis of all examination questions.

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**BIOL 3409 Evolution**

3 credit(s); prerequisite: One semester college biology; Credit will not be granted if credit has been received for: BIOL 5409;

**Instructor:** Zink, Robert Martin

**Description:** This course presents an overview of the biology of evolutionary change. After a brief review of the history of thought in evolutionary biology, genetic mechanisms of evolution change are presented, including mutation and recombination, natural selection and genetic drift. Population genetics and molecular evolution are explored in depth. Examples of macroevolution are presented including adaptation by natural selection, sexual selection, specialization, species concepts and extinction. Human health is used to illustrate the adaptive ability of microorganisms, and we also touch on the evolution of aging.

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**BIOL 3411 Introduction to Animal Behavior**

3 credit(s); prerequisite: One semester college biology; Credit will not be granted if credit has been received for: BIOL 3811;

**Instructor:** Bee, Mark Allen

**Description:** This course introduces the biological study of behavior. Although students from all disciplines are welcome, it is one of three core courses for undergraduate majors in EEB. About half of the course is taught in lecture form, and half in the laboratory. The course covers mechanisms in behavior, including behavior genetics, hormonal and neural mechanisms. The course emphasizes an evolutionary approach to behavior, outlining ideas about feeding, social and reproductive behavior, mating systems, altruism, communication and other contemporary issues in behavioral biology. Laboratory exercises stress experimental approaches to hypothesis testing and involve work with real animals. Students will spend several weeks at the end of the semester conducting an independent project.

**Style:** 40% Lecture. 60% Laboratory.

**Grading:** 20% mid exam, 20% final exam, 13% special projects, 13% class participation, 34% laboratory evaluation.

**Exam Format:** Multiple choice, short answer and short essay.

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**BIOL 3503 Biology of Aging**

2 credit(s); prerequisite: 1002 or 1009 or 2003 or equiv;

**Instructor:** Curtisinger, James W

**Description:** The biology of aging is an integrative discipline, encompassing studies of molecules, genes, cells, tissues, organs, organisms, and populations. In this course we will examine several general areas of research on aging in both ecological and molecular contexts.

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human and model experimental systems, including age-related changes in populations, age-related changes in individuals, genes that influence aging, cellular mechanisms, evolution of senescence, interventions to slow aging, and future prospects for human societies. The course is intended for undergraduates who have completed a college-level course in general biology.

**Style:** 80% Lecture, 15% Discussion, 5% Guest Speakers. Expect to spend about 4 hours per week out of class on reading assignments and notebooks.

**Grading:** 80% quizzes, 20% written homework. Extra credit for reading optional papers and entering in notebooks.

**Exam Format:** Mixture of multiple choice, problem, and short essay

**BIOL 3600 Directed Instruction**

S-N only, 1-2 credit(s), max credits 6, 6 completions allowed; prerequisite 1020, upper div, application, instr consent; up to 4 cr may apply to major; 

**Instructor:** Hanna, Kathryn L

**Description:** This course allows students to gain experience in organizing, leading and evaluating a small group of students by becoming a Student Leader for the Biology Colloquium class (BIOL 1020). Biology Colloquium Student leaders attend the weekly Biology Colloquium class and Student Leader meetings, set up small-group tours, evaluate student journals and tours, and hold office hours. About 6 hours a week are involved during the semester. Prior to the beginning of the semester, a training/orientation session is required and two Student Leader group meetings are held throughout the semester. To be eligible to be a Student Leader, students need to have been completed two of the Biology Colloquium class (BIOL 1020) and be in satisfactory progress within their degree objectives. An application is required and is available at http://bioisci.cbs.umn.edu/bcq or from the instructor.

**Style:** Must attend all class sessions of a BIOL 1020 section.

**BIOL 3610 Internship: Professional Experience in Biological Sciences**

S-N only, 1-6 credit(s), max credits 6, 6 completions allowed; prerequisite Acceptance into CBS Internship Program, internship workshop, college consent; 

**Instructor:** Hanna, Kathryn L

**Description:** Undergraduate students can earn credit for a structured internship that matches their academic and/or career goals in life science with off-campus learning opportunities. Biological sciences internships in industry, non-profit organizations, and government agencies may be found through the Career Center for Science and Engineering (50 Lind Hall, Minneapolis Campus). The number of credits is variable and will be based on time spent on-site and other course requirements. Students must commit to a minimum of 10 hours/week/semester (at least 150 hours). Students will submit a Learning Agreement Form developed in consultation with the on-site internship supervisor and the faculty instructor. Students must meet individually with the instructor in order to register for credit. If a student has questions about a specific internship opportunity, contact the instructor at khanna@umn.edu. Examples of organizations that have hosted internship students include, Hennepin County Medical Center, Minnesota Zoo, MN Bureau of Criminal Apprehension, MN Dept. of Natural Resources, Medtronic, Medtox, Wildlife Rehabilitation Center, and many, many other organizations.

**Style:** Interns will meet as a group for 2 or 3 evening sessions, TBA.

**Grading:** 100% other evaluation. Students are required to keep a weekly journal and write a final reflective paper. Beyond one credit, students may help select the type of assignments that enable them to enhance their internship experience. S/N grading only.

**BIOL 3700 Undergraduate Seminar**

1-3 credit(s), max credits 9, 3 completions allowed; 

**Instructor:** Phillips, Jane Ann

**Description:** The goals of this course include --Learning about sex determination in animals --Reading and discussing research papers --Learning to effectively lead your colleagues in discussions. It's pretty simple, right? You are born a female or a male and you stay that way for life. Well, it really isn't that simple. The XY genetic system of sex determination in humans is not at all a universal system in animals. And even in humans, it is not foolproof. This seminar will explore the fascinating field of different sex determination systems in animals, look at how the systems work, and study how external forces, including estrogen-mimics in our environment, can disrupt these systems. As we venture into aspects of sex determination in humans, we will touch cultural and social issues as well. We'll start by looking at an overview, but then spend some time exploring different aspects of sex determination. We may approach the areas from the molecular, cellular, developmental, ecological, evolutionary, or social perspectives. I can promise that they will all be interesting. In the first 2 weeks of the class, we will explore what we already know about sex determination systems and look at an overview of some of the different areas of sex determination we could explore in more depth. The following weeks of the semester are more loosely structured so that the group can decide what direction we want to take. Once we make that decision, pairs will sign up to lead the discussion that week. This will include finding and assigning readings or papers for everyone to read. I will assist in finding materials to use. Jane

**Style:** 80% Discussion, 10% Field Trips, 10% Guest Speakers.

**Grading:** 25% reports/papers, 25% reflection paper, 50% in-class presentation. Absences will be counted against the in-class participation points since you cannot participate if you are not there.

**BIOL 3700 Undergraduate Seminar**

1-3 credit(s), max credits 9, 3 completions allowed; 

**Instructor:** Brambl, Robert Morgan

**Description:** BIOL 3700: Research Seminars in The Biological Sciences offers undergraduate students the opportunities and skills to expand and explore their interest in the biological sciences by becoming more active participants in research seminars. The course will be divided into three parts: i) classroom activities that prepare students for attending a typical research talk or seminar; ii) seminar attendance, in which students will prepare for and attend five departmental seminars; and iii) student-directed classroom discussions of seminars. Since the format of a research seminar is new to many undergraduate students and differs from most lecture formats, the course will begin with a four-week set of activities on effectively preparing for, listening to and discussing research seminars. Students will then select five seminars of interest offered in the following series: Biochemistry, Molecular Biology & Biophysics (Wednesdays at 4:45 pm), Genetics, Cell Biology & Development (Thursdays at noon); Plant Biology (Tuesdays at 3:30 pm); or Microbiology (Mondays at noon). Following each seminar, students will discuss their seminar experience in the classroom.

**Style:** 65% Discussion, 35% Attending Seminars

**Grading:** 50% attendance, 50% class participation. Attendance in this course is required.
BIOL 3960H Honors Seminar  
A-F only, 1 credit(s), max credits 2; prereq CBS honors;  
Instructor: Decker, Mark David  
Description: Student may contact the instructor or department for information.

BIOL 3960H Honors Seminar  
A-F only, 1 credit(s), max credits 2; prereq CBS honors;  
Instructor: Wick, Susan M  
Description: The class examines attributes of successful oral communication in science. Each student presents a 15-minute talk on some aspect of biology as it relates to society. The talk is videotaped, other class members and the instructor provide feedback on the presentation, and the student writes an analysis of the presentation and a self-assessment relative to the comments made by others.

BIOL 3960H Honors Seminar  
A-F only, 1 credit(s), max credits 2; prereq CBS honors;  
Instructor: Moore, Randy  
Description: Student may contact the instructor or department for information.

BIOL 4003 Genetics  
3 credit(s); prereq [BIOL 3021 or BIOL 4331], [any CBS major or major in [animal science or applied plant science or BA biology or BA microbiology or nutrition or physiology or biology/society/environment]] or instr consent ; Credit will not be granted if credit has been received for: GCD 3022;  
Instructor: Simmons, Michael J  
Description: Introduction to the nature of genetic information, its transmission from parents to offspring, its expression in cells and organisms, and its course in populations. The course is intended for majors in biology and related disciplines.  
Style: 90% Lecture, 10% Discussion.  
Grading: Based on exams and short papers: weighting for the exams and papers will be announced in class.  
Exam Format: problem solving, multiple choice, short answer

BIOL 4003 Genetics  
3 credit(s); prereq [BIOL 3021 or BIOL 4331], [any CBS major or major in [animal science or applied plant science or BA biology or BA microbiology or nutrition or physiology or biology/society/environment]] or instr consent ; Credit will not be granted if credit has been received for: GCD 3022;  
Instructor: Brooker, Robert James  
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policy, fee, and financial aid restrictions. This course is intended to provide you with a broad understanding of genetics. In the first part of the course you will explore the structure, replication, and expression of the genetic material known as deoxyribonucleic acid (DNA). As you examine DNA, you will gain an understanding of the molecular structure of DNA and its organization into units called genes. The next part of the course emphasizes inheritance patterns. In it, you will examine many types of inheritance patterns, including simple Mendelian inheritance, extra-chromosomal inheritance, linkage, and the quantitative traits that are determined by multiple genes. The last part of the course examines the genetic technologies that are used to analyze the genetic compositions of species and have applications in our everyday lives. This course ends with a consideration of genetics at the level of populations, and how the genetic compositions of populations evolve over time.  
Style: Online with handwritten exams  
Grading: 60% mid exam, 30% final exam, 5% quizzes, 5% written homework.  
Exam Format: Supervised, in-person (not online) exams

BIOL 4003 Genetics  
3 credit(s); prereq [BIOL 3021 or BIOL 4331], [any CBS major or major in [animal science or applied plant science or BA biology or BA microbiology or nutrition or physiology or biology/society/environment]] or instr consent ; Credit will not be granted if credit has been received for: GCD 3022;  
Instructor: Glazebrook, Jane  
Description: This is a survey course in Genetics that is aimed at junior and senior undergraduates majoring in the biological sciences. For most students who take this class, it is a required course. Other students are most welcome to participate. The course consists of lectures, including some web-based animations illustrating important concepts, and some examples of problem-solving techniques. A basic understanding of probability and biochemistry is essential for successful learning, as it is a dedication to solving practice problems. The course begins with classical Mendelian genetics, proceeds through basic molecular genetics, and concludes with recombinant DNA, identification of human disease genes, DNA fingerprinting, and transgenic organisms. The course relies heavily on a textbook: “Principles of Genetics” by Snustad and Simmons, 4th edition. Almost all the figures used in lectures come from the textbook, and students are advised to bring the textbook to each lecture.  
Style: 100% Lecture.  
Grading: 70% mid exam, 30% final exam.  
Exam Format: Multiple choice, short answers and problems

BIOL 4003 Genetics  
3 credit(s); prereq [[BIOL 3021 or BIOL 4331], [any CBS major or major in [animal science or applied plant science or BA biology or BA microbiology or nutrition or physiology or biology/society/environment]] or instr consent ; Credit will not be granted if credit has been received for: GCD 3022;  
Instructor: Shima, Naoko  
Description: Course Structure: The course consists of four approximately equal units: (I) Mendelian Genetics, (II) Molecular Genetics, (III) Genetics of Biological Processes, and (IV) Applied and Quantitative Genetics. All four units will emphasize the analysis of experiments and problem solving. Text: Genetics: Analysis & Principles 3rd Edition by Robert J. Brooker (McGraw-Hill)  
Style: 90% Lecture, 10% Discussion.  
Grading: 68% mid exam, 22% final exam, 10% class participation.  
Exam Format: Combination of multiple choice and short-answer questions

BIOL 4004 Cell Biology  
3 credit(s); prereq [3021 or BIOL 3021 or BIOL 4331], [4003 or BIOL 4332];  
Instructor: Brambl, Robert Morgan  
Description: Student may contact the instructor or department for information.

BIOL 4004 Cell Biology  
3 credit(s); prereq [3021 or BIOL 3021 or BIOL 4331], [4003 or BIOL 4332];  
Instructor: Clarke, Duncan John  
Description: Processes fundamental to cells. Emphasizes eukaryotic cells. Assembly/function of membranes/organelles. Cell division, cell cycle control, apoptosis, cell form/movement, ...
intercellular communication, transport, secretion pathways. Cancer cells, differentiated cells.

**Style:** 80% Lecture, 20% Discussion.

**Grading:** 60% mid exam, 20% final exam, 20% quizzes.

**BIOL 4004 Cell Biology**
3 credit(s); prereq [3021 or BIOC 3021 or BIOC 4331], [4003 or BIOC 4332];
Instructor: Chen, Lihsia
**Description:** This course focuses on structures and processes fundamental to cells. We emphasize eukaryotic cells. In particular we will discuss molecular and cellular research methods, assembly/function of membranes and organelles, cell division, cell form/movement, intercellular communication, transport, secretion pathways and stem cells & stem cell technology. This course has a strong problem-solving emphasis.

**Style:** 70% Lecture, 25% Discussion, 5% Guest Speakers.

**Grading:** 50% mid exam, 25% final exam, 10% class participation, 15% problem solving.

**Exam Format:** Multiple choice, short answer, essay

**BIOL 4035 Metagenomics Laboratory**
A-F only, 3 credit(s); prereq BIOL 2004 or equiv;
Instructor: Jarvis, Bruce William
**Description:** Metagenomics is the study of the DNA from all microorganisms present in a given environment. Using modern molecular techniques we can tell what microbes are present and what enzymatic activities they possess. All of this is accomplished without growing the microorganisms, most of which cannot be cultured. This 3 credit course will provide you with the opportunity to contribute to research on human and environmental metagenomes. The basic format of this course will be to meet as a group with a faculty member twice per week and then to work independently in the lab for the rest of the time. Some course activities enable you to address questions concerning microbial diversity by using bioinformatics to study 16S rDNA sequences. In other activities, you would explore the functions of genes from human or environmental microbes. Each of you will play an instrumental role in deciding the project to be undertaken and will be responsible for designing the appropriate experiments.

**Style:** 10% Lecture, 10% Discussion, 75% Laboratory, 5% Student Presentation.

**BIOL 4201 Teaching in the Biology Laboratory**
S-N only, 1 credit(s), max credits 2; prereq Student who is teaching in CBS lab course;
Instructor: Scott, Cheryl L
**Description:** Student may contact the instructor or department for information.

**BIOL 4201 Teaching in the Biology Laboratory**
S-N only, 1 credit(s), max credits 2; prereq Student who is teaching in CBS lab course;
Instructor: Cotner, Sehoya H
**Description:** Student may contact the instructor or department for information.

**BIOL 4700 Cell Physiology**
A-F only, 3 credit(s); prereq 3211 or PHSL 3051 or PHSL 3061; CHEM 1022, MATH 1272, [PHYS 1202W or equiv] recommended;
Instructor: Palmer, Melissa L
**Description:**
BIOL 5407 Ecology
3 credit(s); prereq [One semester college biology, [MATH 1142 or MATH 1271 or MATH 1281 or equiv], grad student] or instr consent ; Credit will not be granted if credit has been received for: EEB 3001; 
Instructor: Tilman,David
Description: Biology 3407 is presented as a series of lectures, discussion sections, and laboratory exercises. The goal of this course is to help you explore: the scientific principles, concepts and theories that are the foundation of ecology; how these are applied to major societal and scientific issues, including those related to human impacts on the functioning, productivity and sustainability of ecosystems at a global scale; and the process of scientific creativity, including hypothesis generation, the design of experiments and observation, critical evaluation of data, the inferences that can be drawn from data, and the implications of these inferences. Laboratory and discussion sections will be led by a teaching assistant (TA) from the Ecology Graduate Program. These sections will illustrate, amplify and explain ecological concepts. Your laboratory experience will include completion of an independent research project. Lecture material, assigned readings from the text, and the scientific papers discussed in both lecture and laboratory form the basis of all examination questions.

BIOL 5409 Evolution
3 credit(s); prereq One semester college biology, grad student; Credit will not be granted if credit has been received for: BIOL 3409; 
Instructor: Zink,Robert Martin
Description: This course presents an overview of the biology of evolutionary change. After a brief review of the history of thought in evolutionary biology, genetic mechanisms of evolution change are presented, including mutation and recombination, natural selection and genetic drift. Population genetics and molecular evolution are explored in depth. Examples of macroevolution are presented including adaptation by natural selection, sexual selection, speciation, species concepts and extinction. Human health is used to illustrate the adaptive ability of microorganisms, and we also touch on the evolution of aging.

BIOL 5910 Special Topics in Biology for Teachers
1-4 credit(s), max credits 12, 12 completions allowed; prereq BA or BS in science or science education or elementary education or K-12 licensed teacher; 
Instructor: Wick,Susan M
Description: Student may contact the instructor or department for information.

BIOL 5910 Special Topics in Biology for Teachers
1-4 credit(s), max credits 12, 12 completions allowed; prereq BA or BS in science or science education or elementary education or K-12 licensed teacher; 
Instructor: Conrey,Jeffrey R
Description: Student may contact the instructor or department for information.

BIOL 6793 Directed Studies
1-7 credit(s), max credits 7, 7 completions allowed; prereq MBS, 7 cr max, instr consent; 
Instructor: Schottel,Janet L
Description: Student may contact the instructor or department for information.

BIOL 6794 Directed Research
S-N only, 1-7 credit(s), max credits 7, 1 completion allowed; prereq MBS, instr consent; 
Instructor: Schottel,Janet L
Description: Student may contact the instructor or department for information.

BIOL 6999 Capstone Project
S-N only, 2 credit(s); prereq MBS, instr consent; 
Instructor: Schottel,Janet L
Description: Student may contact the instructor or department for information.

Biomedical Engineering

BMEN 1601 Biomedical Engineering Undergraduate Seminar I
1 credit(s); prereq credit will not be granted if credit already received for: BMEn 2601; 
Instructor: Tranquillo PhD,Robert T
Description: Student may contact the instructor or department for information.

BMEN 2501 Cellular and Molecular Biology for Biomedical Engineers
A-F only, 4 credit(s); prereq Concurrent registration is required (or allowed) in CHEM 1022, Concurrent registration is required (or allowed) in MATH 1372, Concurrent registration is required (or allowed) in PHYS 1302; 
Instructor: Sachs,Jonathan Nathaniel
Description: Tremendous advances in cellular and molecular biology over the last few decades have advanced the frontiers of medicine and biotechnology. Understanding the basic concepts of how cells and their molecules work is now an important tool for biomedical engineers and a new avenue for advancing medicine through technology. To use this tool requires not only an understanding of the fundamentals of cellular and molecular biology, but also the ability to relate these fundamentals to the physical sciences and mathematics. In doing so engineers can better understand, manipulate, and control cellular and molecular systems for therapy and technology. 
Grading: 20% final exam, 10% reports/papers, 40% quizzes, 30% additional semester exams.

BMEN 3001 Biomechanics
A-F only, 4 credit(s); prereq Math 2374, Phys 1302, [BME upper div or dept consent ]; 
Instructor: Hesla,Todd
Description: Student may contact the instructor or department for information.

BMEN 3201 Bioelectricity and Bioinstrumentation
A-F only, 4 credit(s); prereq [Math 2263 or Math 2374], Phys 1302, [BMEN upper div or dept consent ]; 
Instructor: Akkin,Taneer
Description: Objective: To learn the principles of electrical phenomena and instrumentation relevant to biomedical engineering. 
Style: 60% Lecture, 20% Discussion, 20% Laboratory. APPROXIMATE midterm exam dates are October 8, November 8, December 8, 2010. 
Grading: 45% mid exam, 25% final exam, 15% written homework, 15% laboratory evaluation. 
Exam Format: Closed book, closed notes. A crib-sheet (US Letter measuring 8.5? by 11?, both sides) is allowed in Final Exam.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
BMEN 4001W Biomedical Engineering Design I
A-F only, 3 credit(s); prereq 2501, 3001, 3101, 3201, 3301, 3701; Meets CLE req of Writing Intensive;
Instructor: Ashkenazi, Shai
Description: This is the first course in a two-course series in design. The goal of this sequence is to develop design skills through the completion of a biomedical engineering design project. Through course lectures and exercises involving the design process, students will be exposed to all aspects of designing a new product from concept identification to building a working prototype. The projects are open-ended without a single "unique" solution. The student is supposed to learn the methodology of design. The course will amplify creativity through the group process. The course also trains students on determining consumer need. The writing portion of the course will enhance technical communication skills.

BMEN 4710 Directed Research
A-F only, 1-4 credit(s), max credits 4, 1 completion allowed; prereq instr consent, dept consent;
Instructor: Shen, Wei
Description: Student may contact the instructor or department for information.

BMEN 4720 Directed Study
A-F only, 1-4 credit(s), max credits 4, 1 completion allowed; prereq instr consent, dept consent;
Instructor: Wang, Chun
Description: Student may contact the instructor or department for information.

BMEN 4896 Industrial Assignment I: Co-op Program
A-F only, 2 credit(s); prereq BMEN upper div, completion of required courses in BMEN prog through spring sem of 3rd yr, registered in co-op prog;
Instructor: Shen, Wei
Description: Student may contact the instructor or department for information.

BMEN 5001 Advanced Biomaterials
A-F only, 3 credit(s); prereq 3301 or MatS 3011 or grad student or instr consent;
Instructor: Barocas, Victor Howard
Description: An overview of the types of modern biomaterials and their applications 2) Understand biomaterial selection, design, and structure-function relationships 3) Understand the concept and evaluation of biocompatibility 4) Develop analytical and critical-thinking skills for the evaluation of research literature
Grading: 20% mid exam, 30% final exam, 20% reports/papers, 20% written homework, 10% class participation.

BMEN 5041 Tissue Engineering
3 credit(s); prereq CSE upper div or grad student or med student or instr consent;
Instructor: Shen, Wei
Description: Quantitative cell and tissue biology; characterization of tissues; engineering fundamentals; along with a discussion of engineered tissues presently in development or clinical use.
Grading: 25% mid exam, 30% final exam, 15% reports/papers, 15% written homework, 5% class participation, 10% problem solving.

BMEN 5201 Advanced Biomechanics
3 credit(s); prereq [[3001 or equiv], [CSE upper div or grad student]] or instr consent;
Instructor: Barocas, Victor Howard
Description: Student may contact the instructor or department for information.

BMEN 5351 Cell Engineering
3 credit(s); prereq [2501 or 5501], CSCI 1107, [Math 2243 or Math 2373], [CSEupper div or grad student or instr consent ];
Instructor: Shen, Wei
Description: Many of the innovations that are occurring in medicine are based on advances in our understanding of fundamental cellular and molecular processes. Cell Engineering? is the attempt to understand cellular and molecular processes in a quantitative, physically fundamental way, so that ultimately the behavior of cells can be controlled. The subject is sufficiently new that there is not an accepted textbook in the area. Therefore, I have chosen four topics for study this term. Many other areas were also considered, however in one semester it would not be possible to have much depth in any one area if many topics were included. The course will not cover electrophysiology, as it is covered in other university courses. Instead the focus will be on processes that are principally chemical and mechanical in nature. Neither will the course cover basic cell biology. The main approach will be to review original research papers from the literature to understand the motivation for the work, the approaches taken, the results gained, and their significance. The main goal of the course is to develop the ability to analyze cellular processes using a quantitative, physically based approach. In particular, students will be taught how to develop mathematical and computational models for cellular processes based on the fundamental physics and chemistry of the relevant molecular components.
Grading: 25% special projects, 50% quizzes, 20% written homework, 5% class participation.

BMEN 5401 Advanced Biomedical Imaging
A-F only, 3 credit(s); prereq CSE upper div or grad student or instr consent;
Instructor: He, Bin
Description: Tremendous advances in medical imaging have been witnessed in the past decades. Over the past decade, functional biomedical imaging has played an important role in understanding the mechanisms of biological systems and improving the clinical diagnosis of various diseases. The goal of this course is to introduce important functional biomedical imaging modalities, and discuss the principles and applications of representative functional imaging technologies that offer high spatial resolution or temporal resolution. Our emphasis will be to develop a deep understanding and appreciation of the principles and methodological foundations of bioelectromagnetic imaging and magnetic resonance imaging. Other functional biomedical imaging modalities will also be discussed, including ultrasound, CT, impedance imaging, optical imaging, PET/SPECT, and multimodal imaging. This is one of the core biomedical engineering graduate courses. It is designed to provide a general introduction to biomedical imaging for those who are interested, and an in-depth appreciation of the principles and methods related to bioelectromagnetic imaging and MRI. No prior knowledge with regard to physiology or imaging is required.

BMEN 5411 Neural Engineering
3 credit(s); prereq 3401 recommended;
Instructor: Netoff, Tay Ivan
Description: This course explores the fundamental theoretical basis for neural engineering in the context of past, present, and future applications. The course begins with an introduction to neuroanatomy and neurophysiology assuming students taking the course have little experience in neuroscience. Homework problems will be predominantly building models of neurons and measuring their response to stimulation. The theoretical topics will be taught to develop a deeper understanding and practical knowledge of neural engineering applications. The applications to be studied are arranged by technological maturity. Classical neural engineering subjects include electrode design, neural modeling, cochlear implants, and deep brain stimulation. Developing applications include prosthetic limbs, micrtuation control, and prosthetic vision. Future applications will cover brain machine interface, seizure prediction, optical imaging of the nervous system and place cell recordings in hippocampus. Students will also explore other advanced topics in their own 20 minute presentations at the end of the course.
Style: 70% Lecture, 20% Student Presentation, 10% Guest Speakers.
Grading: 20% mid exam, 20% final exam, 20% written homework, 30% in-class presentation, 10% class participation.
Exam Format: Midterm: multiple choices and matching. Final:
BMEN 5501 Biology for Biomedical Engineers
3 credit(s); prerequisite Engineering upper div or grad student;
Instructor: Sachs, Jonathan Nathaniel
Description: Tremendous advances in cellular and molecular biology over the last few decades have advanced the frontiers of medicine and biotechnology. Understanding the basic concepts of how cells and their molecules work is now an important tool for biomedical engineers and a new avenue for advancing medicine through technology. To use this tool requires not only an understanding of the fundamentals of cellular and molecular biology, but also the ability to relate these fundamentals to the physical sciences and mathematics. In doing so engineers can better understand, manipulate, and control cellular and molecular systems for therapy and technology.
Grading: 20% special projects, 80% quizzes.

BMEN 8101 Biomedical Digital Signal Processing
A-F only, 3 credit(s); prerequisite [[MATH 2243 or MATH 2373], [MATH 2263 or MATH 2374]] or equiv;
Instructor: Lim, Hubert Hyungil
Description: Student may contact the instructor or department for information.

BMEN 8501 Nonlinear Dynamics in Electrophysiology
A-F only, 3 credit(s); prerequisite Grad student in [engineering or physics or math or physiology or neuroscience];
Instructor: Talkachova, Alena
Style: 75% Lecture, 20% Student Presentation, 5% Guest Speakers.
Grading: 30% additional semester exams, 30% in-class presentation, 10% class participation, 30% problem solving.
Exam Format: Approximate dates for exams: October 21 and December 9. Subject to change.

BMEN 8601 Biomedical Engineering Seminar
S-N only, 1 credit(s);
Instructor: Wang, Chun
Description: Student may contact the instructor or department for information.

BMEN 8710 Directed Research
1-3 credit(s), max credits 3, 1 completion allowed;
Instructor: Barocas, Victor Howard
Description: Student may contact the instructor or department for information.

BMEN 8720 Internship in Biomedical Engineering
S-N only, 1-3 credit(s), max credits 6; prerequisite BMEn major;
Instructor: Barocas, Victor Howard
Description: Student may contact the instructor or department for information.

BMEN 8820 Plan B Project
2-3 credit(s), max credits 3, 1 completion allowed; prerequisite BMEn MS student;
Instructor: Barocas, Victor Howard
Description: Student may contact the instructor or department for information.

BMEN 8900 Special Topics in Biomedical Engineering
A-F only, 1-4 credit(s), max credits 8;
Instructor: Johnson, Matthew Douglas
Description: Student may contact the instructor or department for information.

BMEN 8910 Independent Study
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite Grad BMEn major;
Instructor: Barocas, Victor Howard
Description: Student may contact the instructor or department for information.

Biomedical Informatics and Computational Biology
BICB Graduate Program Administration

BICB 8510 Computation and Biology
A-F only, 2 credit(s), max credits 4; prerequisite BICB grad student or instr consent;
Instructor: Neuhauser, Claudia
Description: Student may contact the instructor or department for information.

BICB 8920 BICB Colloquium
S-N only, 1 credit(s), max credits 2; prerequisite BICB grad student;
Instructor: Neuhauser, Claudia
Description: Student may contact the instructor or department for information.

BICB 8930 BICB Journal Club
S-N only, 1 credit(s), max credits 4, 4 completions allowed; prerequisite BICB grad student or instr consent;
Instructor: Neuhauser, Claudia
Description: Student may contact the instructor or department for information.

BICB 8940 Education and Pedagogy Seminar
S-N only, 1 credit(s), max credits 4, 4 completions allowed; prerequisite BICB grad student or instr consent;
Instructor: Neuhauser, Claudia
Description: Student may contact the instructor or department for information.

BICB 8991 Independent Study
S-N only, 1-2 credit(s), max credits 4; prerequisite BICB grad major;
Instructor: Neuhauser, Claudia
Description: Student may contact the instructor or department for information.

Biophysical Sciences
B272 Mayo Memorial Building

BPHY 5138 Research Seminar
S-N only, 1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Ritenour, Russell
Description: Student may contact the instructor or department for information.
University of Minnesota - Course Guide for Twin Cities Campus  
Fall 2011

BBE 1001 Bioproducts and Biosystems Engineering
Orientation
S-N only, 1 credit(s);
Instructor: Seavey,Robert Thomas
Description: Introduction to programs in the department including bioproducts and biosystems engineering, bioproducts marketing and management, residential building science and technology, and corporate environmental management. Orientation to the programs including curriculum, intern, undergraduate research, and honors opportunities. Guest speakers include faculty, alumni, and other professionals related to the program areas. Class time includes a mix of common topics and breakout sessions focused on the various programs. Several field trips or retreat experiences are included.
Style: 50% Lecture, 30% Discussion. Field trips and retreats
Grading: 20% reports/papers, 50% class participation, 30% other evaluation. Participation in field trips and retreats

BBE 1001 Bioproducts and Biosystems Engineering
Orientation
S-N only, 1 credit(s);
Instructor: Morey,R Vance
Description: Introduction to programs in the department including bioproducts and biosystems engineering, bioproducts marketing and management, residential building science and technology, and corporate environmental management. Orientation to the programs including curriculum, intern, undergraduate research, and honors opportunities. Guest speakers include faculty, alumni, and other professionals related to the program areas. Class time includes a mix of common topics and breakout sessions focused on the various programs. Several field trips or retreat experiences are included.
Style: 50% Lecture, 30% Discussion. Field trips and retreats
Grading: 20% reports/papers, 50% class participation, 30% other evaluation. Participation in field trips and retreats

BBE 1906W Freshman Seminar
3 credit(s); prereq Fr; Meets CLE req of Environment; meets CLE req of Writing Intensive;
Instructor: Seavey,Robert Thomas
Description: Student may contact the instructor or department for information.

BBE 2001 Renewable Energy and the Environment
3 credit(s); Meets CLE req of Technology and Society;
Instructor: Huelskamp,Richard James
Description: Course Title: Renewable Energy and the Environment Course Objective: This course is intended to provide an overview of society's diverse choice of renewable energy technologies. An interdisciplinary observation of their potentials, challenges and opportunities will result. Understanding the environmental, technical, and economic implications of each of the renewable energy opportunities will provide the student the ability to make informed personal, career, and public decisions for today's global world. Grading Basis: A-F or S/N Prerequisites: None Class Schedule: 2 lectures per week Tuesdays and Thursdays; some field trips Course Outcomes: As a result of participating in this course, the student will be able to: 1. Identify and describe the present energy use, trends, and impacts. 2. Analyze the existing energy practices to determine what level of energy efficiency and shift in energy resources is necessary. 3. Understand the economic impact and the financial resources needed to use renewable energy technologies. 4. Identify and describe the variety, quantity, and environmental impacts of renewable energy resources. 5. Understand the basic design(s) of renewable energy conversion technologies. 6. Realize the economic and environmental impacts of a renewable energy industry and consider the job opportunities that are and will exist. Topics: Energy use: Where we are now? Non-Renewable Fuels Quantity of transportation, heating, and electricity production fuels used. Environmental impacts as a result of energy use today The economics of using energy resources. Jobs and economic development. Environmental costs of using energy resources. Renewable energy resources Solar Wind Biomass Geothermal Hydro (rivers and oceans) Quantity and availability of renewable energy resources. The promises and problems of solar, wind, biomass, geothermal and hydro energy resources. Comparison of the quantity and availability of renewable energy resources to non-renewable energy resources. Conversion technologies to provide heat, electricity and transportation Non-renewable energy conversion technologies. Renewable energy conversion technologies. Solar thermal and photovoltaic Wind small and large electric generation Biomass solids, liquids, and gases to thermal and electric energy and In addition to energy, consider organic chemicals from biomass Geothermal low and high temperature Hydro (rivers and oceans) small and large electric Economic growth opportunities of the renewable energy industry The energy cost savings The renewable energy industry job growth The financial industry growth due to renewable energy The energy cost savings The renewable energy industry job growth The financial industry growth due to renewable energy resources. Student Performance Assessment: Homework & Projects - 50%; mid term - 25%, Exams - 25% Prepared by: Rich Hueltkamp and Shri Ramaswamy Date: February 14, 2008

BBE 3001 Mechanics and Structural Design
A-F only, 4 credit(s); prereq [MATH 1272 or MATH 1372], [PHYS 1101 or PHYS 1301];
Instructor: Chapin,Jonathan
Description: Fundamental treatment of statics, dynamics, and principles of structural design. Techniques for individual components, including trusses, beams, and columns. Using

Bioproducts and Biosystems Engineering
203 Kaufert Lab

BPHY 5170 Basic Radiological Physics
3 credit(s); prereq instr consent; Credit will not be granted if credit has been received for: TRAD 7170;
Instructor: Gerbi PhD,Bruce John
Description: Student may contact the instructor or department for information.

BPHY 5171 Medical and Health Physics of Imaging I
3 credit(s); prereq 5170 or instr consent; Credit will not be granted if credit has been received for: TRAD 7171;
Instructor: Ritenour,Russell
Description: Student may contact the instructor or department for information.

BPHY 5172 Radiation Biology
3 credit(s); prereq 5170 or instr consent; Credit will not be granted if credit has been received for: TRAD 7172;
Instructor: Yuan MD,PhD,Jianling
Description: Student may contact the instructor or department for information.

BPHY 8149 Advanced Topics in Radiation Therapy Physics
A-F only, 2 credit(s); prereq [5170, 5173] or instr consent ;
Instructor: Higgins,Patrick Dennis
Description: Student may contact the instructor or department for information.

BPHY 8293 Directed Study in Biophysical Sciences and Medical Physics
1-12 credit(s), max credits 12, 1 completion allowed; prereq instr consent;
Instructor: Ritenour,Russell
Description: Student may contact the instructor or department for information.

BPHY 8294 Directed Research in Biophysical Sciences and Medical Physics
1-12 credit(s), max credits 12, 1 completion allowed; prereq instr consent;
Instructor: Ritenour,Russell
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
conventional lumber products, engineered wood products, and steel. Lab.

BBE 3002 Introduction to Engineering Design
A-F only, 3 credit(s); prereq [MATH 1271 or MATH 1371, CHEM 1021, BBE lower div (soph) or upper div (jr), freshman writing req] or instr consent;
Instructor: Nieber, John Little
Description: Student may contact the instructor or department for information.

BBE 3002 Introduction to Engineering Design
A-F only, 3 credit(s); prereq [MATH 1271 or MATH 1371, CHEM 1021, BBE lower div (soph) or upper div (jr), freshman writing req] or instr consent;
Instructor: Nieber, John Little
Description: Student may contact the instructor or department for information.

BBE 3013 Engineering Principles of Molecular and Cellular Processes
A-F only, 3 credit(s); prereq BIOL 1009, [Chem 1022 or Concurrent registration is required (or allowed) in Chem 1022], Math 1272;
Instructor: Barney, Brett M
Description: Student may contact the instructor or department for information.

BBE 3023 Ecological Engineering Principles
3 credit(s); prereq BIOL 1009, [CHEM 3502 or Concurrent registration is required (or allowed) in CE 3502] or instr consent;
Instructor: Clanton, Chuck
Style: 60% Lecture, 15% Discussion, 25% Laboratory.
Grading: 40% final exam, 15% reports/papers, 30% quizzes, 15% laboratory evaluation.
Exam Format: Problems, short answer

BBE 3023 Ecological Engineering Principles
3 credit(s); prereq BIOL 1009, [CE 3502 or Concurrent registration is required (or allowed) in CE 3502] or instr consent;
Instructor: Clanton, Chuck
Description: Student may contact the instructor or department for information.

BBE 3093 Directed Studies
1-5 credit(s), max credits 5, 1 completion allowed; prereq instr consent;
Instructor: STAFF
Description: Independent study of topic(s) involving physical principles as applied to agricultural production and land resources. Contact the department for information.

BBE 3101 Introductory Statics and Structures for Construction Management
A-F only, 3 credit(s); prereq Working knowledge of [trigonometry, geometry, algebra];
Instructor: STAFF
Description: Statics, engineering wood design principles, mechanical properties of wood. Design techniques for individual components. Trusses, beams, columns. Using conventional lumber products, engineered wood products, and steel. Simple structures explored through examples, assignments.

BBE 3393 Directed Study
1-3 credit(s), max credits 12, 4 completions allowed; prereq instr consent;
Instructor: STAFF
Description: Opportunity to pursue experience not available through independent study or extra credit. In consultation with an advisor students develop a prospectus and complete progress reports and a final report on the project.

BBE 3396 Industrial Internship (Industrial Assignment)
A-F only, 1 credit(s); prereq BBE cooperative ed student;
Instructor: STAFF
Description: Industrial work assignment in forest products cooperative education programs. Evaluation based on formal report written by student at end of each semester of work assignment.

BBE 3503 Marketing of Bio-based Products
A-F only, 4 credit(s); Credit will not be granted if credit has been received for: BBE 5503;
Instructor: Smith, Tim
Description: Student may contact the instructor or department for information.

BBE 4001 Chemistry of Plant Materials
A-F only, 4 credit(s); prereq CHEM 2301, [jr or sr or instr consent]; Credit will not be granted if credit has been received for: BBE 5001;
Instructor: Tschirner, Ulrike Waltrau
Description: The first half of this course is focused on fundamentals such as the chemical composition of plant materials and typical reactions. The topics covered include: Carbohydrate Chemistry, Cellulose, Hemicellulose, Lignin, distribution of chemical components in plant material, Extractives and Oils, Starch, Proteins including Enzymes, Alkaloids. The second part of this class is focused on chemical reactions involved in conversion of biomass to industrial products; it includes the new emerging field of biomass conversion to Bioenergy and Bioproducts and traditional processes such as production of rayon or papermaking fiber. Examples of chemical reactions involved in biorefining include: conversion of cellulose and hemicellulose to ethanol, furfural, PLA (Polylactic acid); conversion of oil to biodiesel; gasification of biomass followed by Fisher Tropsch conversion to fuels.
Style: 70% Lecture, 30% Discussion.
Grading: 30% final exam, 40% quizzes, 25% written homework, 5% class participation. Based on 6 quizzes, 6 homeworks, final exam

BBE 4012 Transport in Biological Processes I
A-F only, 4 credit(s); prereq 3001, (MATH 2243 or 2373), (MATH 2263 or 2374), PHYS 1302W;
Instructor: Nieber, John Little
Description: Student may contact the instructor or department for information.

BBE 4012 Transport in Biological Processes II
A-F only, 4 credit(s); prereq 3001, (MATH 2243 or 2373), (MATH 2263 or 2374), PHYS 1302W;
Instructor: Nieber, John Little
Description: Student may contact the instructor or department for information.

BBE 4023W Process Control and Instrumentation
A-F only, 3 credit(s); prereq Upper div CSE or grad student; Credit will not be granted if credit has been received for: BBE 5023; Meets CLE req of Writing Intensive;
Instructor: Janni, Kevin A
Description:

BBE 4023W Process Control and Instrumentation

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
University of Minnesota - Course Guide for Twin Cities Campus  Fall 2011

A-F only, 3 credit(s); prereq Upper div CSE or grad student;
Credit will not be granted if credit has been received for:
BBE 5023; Meets CLE req of Writing Intensive;
Instructor: Jacobson, Ander
Description: Instrumentation and control equipment and systems for monitoring and studying biological systems. Course objectives are: 1) Introduce students to instrumentation terminology, performance characteristics, uncertainty analysis, calibration and data acquisition; 2) Have students simplify dynamic process models for analysis in the S-domain using Laplace Transforms, generate model transfer functions and classify the dynamic behavior of closed-loop process systems based on their time-domain, transfer function, and frequency-domain representations; 3) Introduce students to open-loop and closed-loop control terminology, principles and equipment; 4) Introduce students to Proportional-Integral-Derivative (PID) controllers; 5) Have students analyze control system stability and performance; 6) Have students understand practical control issues and the benefits of control engineering for improving operations, safety, and environmental compliance; 7) Introduce students to sensors and instruments to measure motion, pressure, strain and temperature; 8) Have students become familiar with the principles of sensors used in the measurement of mechanical, physical and chemical parameters; 9) Have students become familiar with PC-based data acquisition equipment and its use; 10) Have students integrate their instrumentation and process control knowledge in a comprehensive written design report that explains and recommends an instrumentation and process control system.
Style: 60% Lecture, 10% Discussion, 30% Laboratory.
Grading: 20% mid exam, 10% final exam, 35% reports/papers, 15% laboratory evaluation, 20% problem solving.
Exam Format: Matching, short problems, short answer

BBE 4305 Pulp and Paper Technology
3 credit(s); prereq Jr or instr consent;
Instructor: Tschirner,Ulrike Waltrau
Description: Student may contact the instructor or department for information.

BBE 4401 Bioproducts Engineering
A-F only, 3 credit(s); prereq [3033, CE 3502, UD] or instr consent;
Instructor: Ramaswamy,Shri
Description: Basic principles of unit operations and their applications to bio-based products manufacturing - chemical reaction engineering, solid-liquid separation processes, solid-solid separation processes, evaporation, distillation, combustion, gasification, drying, etc. Applying unit operations and material properties to design processes and to manufacture conventional and emerging bio-based products including biofuels, bioenergy, and bio-plastics.

BBE 4403 Bio-based Products Engineering Lab II
A-F only, 1 credit(s); prereq CHEM 2301, Jr or sr or instr consent;
Instructor: Tschirner,Ulrike Waltrau
Description: Engineering principles as they apply to bio-based products; hands-on lab experiments including: chemical reaction kinetics, mass and energy balance during pulping, cellulose viscosity measurement, recycling of paper, flow through porous media (paper), liquid permeability, sizing test, drying (heat and mass transfer), production of composits product.
Style: 10% Lecture, 90% Laboratory.
Grading: 100% other evaluation. Based on work sheets, participation including team performance, open book final exam

BBE 4407 Bioproducts: Manufacturing and Applications
3 credit(s); prereq 1002 or instr consent; Credit will not be granted if credit has been received for: BBE 5407;
Instructor: Seavey,Robert Thomas
Description: 4 credit(s); prereq 3001 or WPS 4301; Credit will not be granted if credit has been received for: BBE 5414;
Instructor: Huelman,Patrick Henry
Description: This course is intended to be an advanced course. Students are expected to be fully prepared and engaged in the content and its application. Approximately 80% of the course will be heavily structured to cover the critical content, but some time will be left for discussion. The course will give the student an excellent grasp of the key building science principles and the ability to put these principles to work in both a qualitative and quantitative manner to resolve common energy, moisture, and indoor air quality issues in residential buildings.
Style: 80% Lecture, 15% Discussion, 5% Student Presentation.
Grading: 60% mid exam, 15% written homework, 25% in-class presentation. Grades based off of percentages.
Exam Format: Short answers and problems

BBE 4491 Senior Topics: Independent Study
1-4 credit(s), max credits 4, 1 completion allowed; prereq sr, instr consent;
Instructor: STAFF
Description: Independent study in an area of interest to an undergraduate majoring in one of the fields within the College of Food, Agricultural and Natural Resources Sciences.

BBE 4535 Assessment and Diagnosis of Impaired Waters
A-F only, 3 credit(s); prereq Upper division CSE or CFANS or CBS student or instr consent; Credit will not be granted if credit has been received for: BBE 5535;
Instructor: Magner,Joe
Description: This course was designed to prepare students to work in the water quality industry in the USA. The goal is to provide students with the background policy, models and field methods needed to prepare a TMDL. Students will learn about varying models and spend two saturdays in the field discussing/collecting data.
Style: 40% Lecture, 20% Student Presentation, 20% Field Trips, 20% Guest Speakers.
Grading: 30% final exam, 35% special projects, 25% written homework, 10% attendance.

BBE 4744 Engineering Principles for Biological Scientists
A-F only, 4 credit(s); prereq [Math 1142 or Math 1271], Phys 1101; intended for non engineering students; Credit will not be granted if credit has been received for: FSCN 4331;
Instructor: Morey,R Vance
Description: Intended for food and biological sciences students who are interested in understanding engineering principles applied to selected unit operations. Not intended for engineering students. Material and energy balances applied to processing systems. Principles of fluid flow, thermodynamics, heat and mass transfer applied to food and bioproces unit operations such as pumping, heat exchange, refrigeration and freezing, drying, evaporation, and separation.
Style: 60% Lecture, 15% Discussion, 25% Laboratory.
Grading: 30% mid exam, 20% final exam, 10% quizzes, 25% laboratory evaluation, 15% problem solving.
Exam Format: Problems to work.

BBE 4744 Engineering Principles for Biological Scientists
A-F only, 4 credit(s); prereq [Math 1142 or Math 1271], Phys 1101; intended for non engineering students; Credit will not be granted if credit has been received for: FSCN 4331;
Instructor: Smith,David Eugene
Description: Student may contact the instructor or department for information.

BBE 4801H Honors Research
A-F only, 2 credit(s); prereq BP upper div honors;
Instructor: STAFF
Description: First semester of independent research project supervised by faculty member.

BBE 4900 Intern Reports
S-N only, 2 credit(s), max credits 4; prereq CSE or COAFES student in BAE, instr consent;
**BBE 5001 Chemistry of Plant Materials**  
A-F only, 4 credit(s); prerequisite Grad student or instr consent; Credit will not be granted if credit has been received for: BBE 4001;  
**Instructor:** Tschirner, Ulrike Waltrau  
**Description:** Chemistry of cellulose, hemicellulose, lignin, extractives, proteins and other plant materials. About half of course focused on fundamentals, including building blocks of these natural polymers and typical reactions. Remaining course focuses on applications related to these materials (chemicals from biomass, cellulotic ethanol, biodiesel, biodegradable plastics, rayon, papermaking fibers, etc.)  
**Style:** 70% Lecture, 30% Discussion.  
**Grading:** 100% other evaluation. Based on 6 quizzes, 6 homeworks, final exam

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**BBE 5023 Process Control and Instrumentation**  
3 credit(s); prerequisite Grad student or instr consent; Credit will not be granted if credit has been received for: BBE 4023W;  
**Instructor:** Janni, Kevin A  
**Description:** Instrumentation and control equipment and systems for monitoring and studying biological systems. Course objectives are: 1) Introduce students to instrumentation terminology, performance characteristics, uncertainty analysis, calibration and data acquisition; 2) Have students simplify dynamic process models for analysis in the S-domain using Laplace Transforms, generate model transfer functions and classify the dynamic behavior of closed-loop process systems based on their time-domain, transfer function, and frequency-domain representations; 3) Introduce students to open-loop and closed-loop control terminology, principles and equipment; 4) Introduce students to Proportional-Integral-Derivative (PID) controllers; 5) Have students analyze control system stability and performance; 6) Have students understand practical control issues and the benefits of control engineering for improving operations, safety, and environmental compliance; 7) Introduce students to sensors and instruments to measure motion, pressure, strain and temperature; 8) Have students become familiar with the principles of sensors used in the measurement of mechanical, physical and chemical parameters; 9) Have students become familiar with PC-based data acquisition equipment and its use; 10) Have students integrate their instrumentation and process control knowledge in a comprehensive written design report that explains and recommends an instrumentation and process control system.  
**Style:** 60% Lecture, 10% Discussion, 30% Laboratory.  
**Grading:** 20% mid exam, 10% final exam, 35% reports/papers, 15% laboratory evaluation, 20% problem solving.  
**Exam Format:** Matching, short problems, short answer

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**BBE 5095 Special Problems**  
1-5 credit(s), max credits 5, 1 completion allowed; prerequisite instr consent;  
**Instructor:** STAFF  
**Description:** Advanced individual-study project. Application of engineering principles to specific problem. Student may contact the instructor or department for information.

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**BBE 5305 Pulp and Paper Technology**  
3 credit(s); prerequisite Grad student or instr consent;  
**Instructor:** Tschirner, Ulrike Waltrau  
**Description:** Student may contact the instructor or department for information.

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**BBE 5401 Bioproducts Engineering**  
A-F only, 3 credit(s); prerequisite Grad student or instr consent;  
**Instructor:** Ramaswamy, Shri  
**Description:** Basic principles of unit operations and their applications to bio-based products manufacturing - chemical reaction engineering, solid-liquid separation processes, solid-solid separation processes, evaporation, distillation, combustion, gasification, drying, etc. Applying unit operations and material properties to design processes and to manufacture conventional and emerging bio-based products including biofuels, bioenergy, and bio-plastics.

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**BBE 5403 Biobased Products Engineering Lab II**  
A-F only, 1 credit(s); prerequisite Grad student or instr consent; Credit will not be granted if credit has been received for: BBE 4403;  
**Instructor:** Tschirner, Ulrike Waltrau  
**Description:** Engineering principles as they apply to bio-based products; hands-on lab experiments including; chemical reaction kinetics, mass and energy balance during pulping, cellulose viscosity measurement, recycling of paper, flow through porous media (paper), liquid permeability, sizing test, drying (heat and mass transfer), production of composites product.  
**Style:** 10% Lecture, 90% Laboratory.  
**Grading:** 100% other evaluation. Based on work sheets, participation including team performance, open book final exam

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**BBE 5407 Bioproducts: Manufacturing and Applications**  
3 credit(s); prerequisite Grad student or instr consent; Credit will not be granted if credit has been received for: BBE 4407;  
**Instructor:** Seavey, Robert Thomas  
**Description:**

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**BBE 5414 Advanced Residential Building Science**  
4 credit(s); prerequisite Grad student or instr consent; Credit will not be granted if credit has been received for: BBE 4414;  
**Instructor:** Huelman, Patrick Henry  
**Description:** Student may contact the instructor or department for information.

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**BBE 5503 Marketing of Bio-based Products**  
A-F only, 4 credit(s); prerequisite Grad student or instr consent; Credit will not be granted if credit has been received for: BBE 3503;  
**Instructor:** Smith, Tim  
**Description:** Student may contact the instructor or department for information.

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**BBE 5513 Watershed Engineering**  
A-F only, 3 credit(s); prerequisite 3023, upper div CSE;  
**Instructor:** Wilson, Bruce Nord  
**Description:** Application of engineering principles to managing surface runoff from agricultural, range, and urban watersheds. Design of facilities and selection of land use practices for controlling surface runoff to mitigate problems of flooding and degradation of surface-water quality.  
**Style:** 60% Lecture, 20% Laboratory, 15% Small Group Activities, 5% Field Trips.  
**Grading:** 25% mid exam, 35% final exam, 25% special projects, 15% problem solving.

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**BBE 5513 Watershed Engineering**  
A-F only, 3 credit(s); prerequisite 3023, upper div CSE;  
**Instructor:** Wilson, Bruce Nord  
**Description:** Class URL: https://wiki.umn.edu/view/Wilson/WatershedEngineering  
Students will apply engineering principles in the management and design of hydrologic and surface water quality systems. Specific objectives are to understand and use: 1) Hydrologic analysis techniques for small watersheds; 2) Design techniques for small reservoirs and detention ponds for reducing peak flow rates and sediment concentrations; 3) Design techniques of surface water conveyance systems.  
**Style:** 60% Lecture, 20% Laboratory, 15% Small Group Activities, 5% Field Trips.  
**Grading:** 25% mid exam, 35% final exam, 25% special projects, 15% written homework.  
**Exam Format:** Open book problems

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**BBE 5535 Assessment and Diagnosis of Impaired Waters**  
A-F only, 3 credit(s); prerequisite Grad student or instr consent; Credit will not be granted if credit has been received for:
BA 4535;  
**Instructor:** Magner, Joe  
**Description:** This course was designed to prepare students to work in the water quality industry in the USA. The goal is to provide students with the background policy, models and field methods needed to prepare a TMDL. Students will learn about varying models and spend two Saturdays in the field discussing/collecting data.  
**Style:** 40% Lecture, 20% Student Presentation, 20% Field Trips, 20% Guest Speakers.  
**Grading:** 30% final exam, 35% special projects, 25% written homework, 10% attendance.  

BA 8001 Seminar I  
**A-F only, 1 credit(s);**  
**Instructor:** Sarkaran, Simo  
**Description:** Student may contact the instructor or department for information.  

BA 8013 Parameter Estimation in Biosystems and Agricultural Engineering  
**A-F only, 3 credit(s); prereq Stat 3021 or equiv, computer programming course;**  
**Instructor:** Wilson, Bruce Nord  
**Description:** Student may contact the instructor or department for information.  

BA 8300 Research Problems  
**1-10 credit(s), max credits 10, 10 completions allowed; prereq instructor consent;**  
**Instructor:** Seavey, Robert Thomas  
**Description:** Student may contact the instructor or department for information.  

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**Business Administration**  
**2-190 Hanson Hall**  

**BA 3000 Career Skills**  
**S-N only, 1 credit(s); prereq CSOM soph or upper div major;**  
**Instructor:** Nelson, Elaine W  
**Description:** Student may contact the instructor or department for information.  

**BA 3000 Career Skills**  
**S-N only, 1 credit(s); prereq CSOM soph or upper div major;**  
**Instructor:** Coenen, Scott Alan  
**Description:** Required for all Carlson School students, this course focuses on career discovery and tactical preparation for the internship and career searches. In this course you will: 1. Clarify personal interests, values, skills and abilities and learn the importance of self-assessment and self-awareness in identifying career options. 2. Develop professional resumes, cover letters and correspondence. 3. Develop a contact network and understand how to engage your network in the career planning process. 4. Understand and utilize professional business etiquette. 5. Research organizations to better prepare for interviews and company interactions, as well as to determine your best organizational “fit.” 6. Interview effectively, with specific emphasis on how to convey your background, skills, career goals and the value you bring to an organization. 7. Access internship, part-time and full-time employment opportunities. 8. Understand employment trends and their effect on career options. 9. Develop an overall career search strategy. We advise all students to take this course during the sophomore year, ideally during the fall semester.  

**BA 3000 Career Skills**  
**S-N only, 1 credit(s); prereq CSOM soph or upper div major;**  
**Instructor:** Bartels, Christiane A  
**Description:** This required course is designed to prepare undergraduate students for 1) the career search process, 2) to use the Carlson School of Management Career Services Center and 3) to use the on-line recruiting system, C.A.R.S. (Carlson Automated Recruiting System). Topics include the importance of self-awareness and values assessment in identifying career options; how to access and use information related to career planning and jobs; networking; resume preparation, cover letters and correspondence; interviewing skills; professional etiquette and image in the work setting; employment trends; goal setting; and overall career strategy planning. The course is coordinated by the Business Career Center at the Carlson School and will utilize a variety of teaching techniques, with significant emphasis on classroom activities. Homework assignments will focus on helping students develop skills and strategies necessary for internship and full-time job searches. The perspective of the course is that critical elements of career development and growth include self-understanding, skill development and usage, awareness of career options, decision-making, and evaluation.  

**BA 3000 Career Skills**  
**S-N only, 1 credit(s); prereq CSOM soph or upper div major;**  
**Instructor:** Beck, Sheri A  
**Description:** Student may contact the instructor or department for information.  

**BA 3000 Career Skills**  
**S-N only, 1 credit(s); prereq CSOM soph or upper div major;**
BLAW 3058 The Law of Contracts and Agency
A-F only, 4 credit(s); prereq 40 or more credits;
Instructor: Kramer, Jack
Description: First third of the course covers contracts and sales using the Socratic method of case analysis, much like a law school approach. Remainder of the course covers the law of warranties, product liability, negotiable instruments, real estate, wills and estates, agency, equal opportunity in employment law, secured transactions, and law relating to public companies and corporate governance.
Grading: 30% final exam, 60% additional semester exams, 10% class participation.
Exam Format: Mostly multiple choice. Also, short answer questions based on law school-type hypos.

BIE 3001 Teaching Marketing Promotion
A-F only, 3 credit(s);
Instructor: Richardson, Tiffany
Description: Student may contact the instructor or department for information.

BIE 3061 Professional Sales Management
A-F only, 3 credit(s);
Instructor: Mueller, Wayne G
Description: Student may contact the instructor or department for information.

BIE 3624 Sales Training
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: BIE 5624;
Instructor: Gaddey Jr, Roy Arthur
Description: Student may contact the instructor or department for information.

BIE 3993 Directed Study: BIE
1-4 credit(s), max credits 4, 1 completion allowed;
Instructor: Stertz EdD, Tom
Description: Student may contact the instructor or department for information.

BIE 4196 Internship: Business and Marketing Education
S-N only, 1-3 credit(s), max credits 3, 1 completion allowed;
prereq 3661, 3624, 4626, or BME major;
Instructor: Snyder, Lynn M.
Description: Student may contact the instructor or department for information.

BIE 5452 Methods of Teaching Business and Marketing Concepts
A-F only, 3 credit(s);
Instructor: Horazdovsky PhD, Jerry Edward
Description: Student may contact the instructor or department for information.

BIE 5796 Field Based Projects in Business and Industry
S-N only, 1-4 credit(s), max credits 4, 1 completion allowed;
Instructor: Stertz EdD, Tom
Description: Student may contact the instructor or department for information.

BIE 5993 Directed Study in Business and Industry
1-4 credit(s), max credits 4, 1 completion allowed;
Instructor: Stertz EdD, Tom
Description: Student may contact the instructor or department for information.
CSPH 1001 Principles of Holistic Health and Healing
2 credit(s);
Instructor: Brady, Linda J
Description: This course focuses on how individuals and society can work for a balanced life to achieve optimal health with our stressful lifestyles. Topics include: 1. What is health and well-being? 2. Cultural constructs of health and well-being; 3. Fundamental principles and proven measures of holistic health that promote health and well being; 4. Practical application and integration of holistic health practices into daily personal life. Class will be interactive and students will reflect on the application of the principles to their daily lives; a key component of class is to become more mindful and "present" in our daily lives and then to understand how we can apply this to be more balanced as students in US society. The text will be Integral Healing by Elliott Dacher, 2006; additional readings will be from the CSpH website modules and other websites.
Style: 50% Lecture, 50% Discussion. Most classes will present information and students will discuss/reflect on it in class groups.
Grading: 67% reflection paper, 33% class participation. Each assignment will ask students to read information or watch a video and then to answer questions and reflect on the significance of the material and its application to their lives.
Exam Format: No exams.

CSPH 1101 Self, Society, and Environment: An Integral Systems Approach to Personal Wellbeing and Engagement
3 credit(s);
Instructor: Brady, Linda J
Description: Students will examine and reflect on the internal and external systems which influence their lives and health using various "ways of knowing" such as science, complexity theory, and other world views. They will examine the interrelated workings of mind and body and explore a variety of means of bringing these into dynamic balance. They will examine the variety of environmental and social systems in which they participate, once again combining theory, experience, and reflection to explore the optimal functioning of these systems, both for individuals and the collective whole. In addition to applying their learning within the realm of personal well-being, students will learn to be social entrepreneurs, bringing health and balance to the social and environmental systems in which they participate.
Style: 25% Lecture, 50% Discussion, 25% Small Group Activities.
Grading: 75% written homework. 25% reflection paper. Class format will be to prepare written assignments before class, discuss in small and large groups, then submit homework assignments based on both reading and class discussion for the week.
Exam Format: No exams.

CSPH 3201 Introduction to Mindfulness-Based Stress Reduction
2 credit(s);
Instructor: Storlie, Erik Fraser
Description: The class will introduce students to a variety of techniques by which the stress endemic in a fast-paced competitive culture can be both reduced, as well as worked with constructively. Students will engage in both experiential and intellectual learning. They will practice and apply techniques of stress-reduction through "mindfulness" - the steady, intentional gathering of a non-judgmental awareness into the present moment in various activities. They will also think critically as they study and evaluate recent medical-scientific literature on the physiological and psychological elements in the stress response.

CSPH 5000 Explorations in Complementary Therapies and Healing Practices
1-4 credit(s), max credits 12, 4 completions allowed; prerequisite Jr or Sr or grad student or instr consent;
Instructor: Halcron, PhD, Linda Luciente
Description: Students may contact the instructor or department for information.

CSPH 5000 Explorations in Complementary Therapies and Healing Practices
1-4 credit(s), max credits 12, 4 completions allowed; prerequisite Jr or Sr or grad student or instr consent;
Instructor: Kreitzer, Mary Jo
Description: Students may contact the instructor or department for information.

CSPH 5101 Introduction to Integrative Healing Practices
3 credit(s); prerequisite Jr or Sr or grad student or instr consent;
Instructor: Culliton, Patricia D
Description: Students may contact the instructor or department for information.

CSPH 5102 Art of Healing: Self as Healer
1 credit(s); prerequisite Jr or Sr or grad student or instr consent;
Instructor: Culliton, Patricia D
Description: Students may contact the instructor or department for information.

CSPH 5102 Art of Healing: Self as Healer
1 credit(s); prerequisite Jr or Sr or grad student or instr consent;
Instructor: Gorman, Rebecca Sue
Description: CSPH 5102: Art of Healing: Self as Healer (1.0 cr; Prereq: Jr or Sr or grad student or #; fall, spring, every year)
Introduction to individual transformational journey as part of health science education. Students become aware of their responsibility/resources to facilitate development of the self. Research data, experience of self that is part psychoneuroimmunology, mind-body-spirit approaches. Lecture, scientific literature, meditation, imagery, drawing, group interaction.

CSPH 5111 Ways of Thinking about Health
S-N only, 2 credit(s), max credits 4; prerequisite Jr or Sr or grad student or instr consent; instructor permission required for second enrollment in course;
Instructor: Hassel, Craig Alan
Description: CSPH 5111: Ways of Thinking about Health? offers students a rare opportunity to explore diverse cultural contexts through field-trip immersion experiences. In this course, we will explore fundamental aspects of several different health-care systems, including Indigenous North American Medicine, Vedic Medicine, Traditional Chinese Medicine and biomedicine. The field-trip learning serves as a micro-cultural immersion experience for the purpose of helping students to understand different worldviews and systems of knowledge that do not correspond to a scientific model. The course is based upon the idea that thinking about different worldviews and healing systems from a detached, survey perspective is a quite different matter than thinking critically within the system being explored to attain deeper learning. Each field trip experience will be followed by a writing assignment, where the student will write on a health care issue of their choice, but from within the perspective of the system being studied. This approach is designed to allow each student the maximum opportunity to explore, experience, appreciate and articulate the cultural diversity in ways of thinking about health.
Style: 20% Lecture, 30% Discussion, 50% Field Trips.
Grading: 70% reflection paper, 30% in-class presentation.

CSPH 5211 Peacemaking and Spirituality: A Journey Toward Healing and Strength
2-3 credit(s), max credits 3, 1 completion allowed; prerequisite Jr or Sr or grad student or instr consent;
Description: Students may contact the instructor or department for information.
Instructor: Umbreit, Mark S  
Description: This course is designed to provide a basic understanding of the central elements of peacemaking and spirituality in the context of various healthcare and social work settings. Examples include intense interpersonal conflicts between patients/providers, between nurses/social workers, between coworkers; within families and within communities; among friends and within ourselves. This course has 2-credit and 3-credit options. Students in the 3-credit option would go deeper into the subject matter to gain understanding of practices that contribute to peacemaking and spirituality that are grounded in diverse cultural traditions among indigenous people of the world and an understanding of the strengths and significant limitations of the dominant theory and practice of conflict resolution and mediation in Western European culture.

CSPH 5225 Meditation: Integrating Body and Mind  
2 credit(s); prereq Jr or Sr or grad student or instr consent;  
Instructor: Storlie, Erik Fraser  
Description: Description: The class approaches meditation as a physical, emotional, intellectual, and spiritual inquiry. Students read selections in a variety of relevant texts and develop the ability to enter into a state of calm, meditative awareness. Objectives: Students will 1. demonstrate an understanding of the intellectual background of meditation, reading sources from the mainstream religious traditions of East and West, from indigenous sources, from contemporary practitioners, and from current scientific work linking mediation with wellness; 2. demonstrate the ability to assume a strong, stable, and relaxed physical posture sitting on cushions, benches, or chairs; 3. demonstrate the ability to calm the breath through a focus on deep, diaphragm breathing; 4. demonstrate the ability to dwell in steady consciousness of consciousness itself, allowing emotions and thoughts to rise and fall in calm awareness; 5. describe and discuss some of the many scientific, philosophical, existential, and spiritual questions that arise concerning the nature of human consciousness.

CSPH 5226 Advanced Meditation: Body, Brain, Mind, and Universe  
1 credit(s); prereq [5225, [jr or sr or grad student]] or instr consent;  
Instructor: Kreitzer, Mary Jo  
Description: Student may contact the instructor or department for information.

CSPH 5315 Traditional Tibetan Medicine: Ethics, Spirituality, and Healing  
2 credit(s); prereq Jr or Sr or grad student or instr consent;  
Instructor: Casas, Dr. Miriam Elaine  
Description: This course will introduce students to ethics, spirituality, and healing from the perspective of traditional Tibetan medicine. Traditional Tibetan doctors believe that illness results from imbalance and that treating illness requires correcting the underlying imbalance. Students will learn how to apply these principles personally, integrate them into clinical practice, and consult with a traditional Tibetan doctor. Part of 3-course sequence with CSPH 5317 - "Yoga: Ethics, Spirituality, & Healing" (Sum); CSPH 5318 - "Tibetan Medicine, Ayurveda, & Yoga in India" (May Session). CSPH 5315 and CSPH 5317 are prerequisites for CSPH 5318. To read more, go to Dr. Cameron's web site: http://www.tc.umn.edu/~camer008/courses.html  
Grading: 35% Lecture, 10% Film/Video, 25% Discussion, 15% Student Presentation, 15% Guest Speakers. The 10 classes meet on Wednesdays, from 4:40-7:30 p.m. Eligible students can take the course as a distance course. For info, contact Dr. Cameron: <camer008@umn.edu>  
Exam Format: No exams.

CSPH 5331 Foundations of Shamanism and Shamanic Healing  
S-N only, 2 credit(s); prereq Jr or sr or grad student or instr consent;  
Instructor: Lawson MD, Karen Lynn  
Description: In this fundamentals course, students will learn essential elements of the non-biomedical shamanic "life-way" at the foundation of all shamanism. Participants will study shamanic beliefs about the individual's role in life, community, and the universe, and how these ideas are at the core of all shamanic healing practices. They will study cross-cultural healing beliefs and practices, the unique psychology necessary to understand them, and how these approaches may be used with contemporary healing practices and for personal growth. This course provides a core understanding of shamanic philosophies and ritual etiquette, properly preparing students to continue in deeper personal study and/or to participate in an experiential cultural immersion (e.g. via a Global Healing Traditions course.)

CSPH 5405 Plants in Human Affairs  
4 credit(s); prereq Jr or Sr or grad student or instr consent;  
Instructor: McKenna PhD, Dennis Jon  
Description: This 15-credit, intensive course taught in Hawaii introduces students to the science of ethnobotany, ethnopharmacology, and plants in human affairs through lectures, field trips and presentations by local experts. This introductory course will focus on the role of plants in human affairs. The course will include a combination of topics relevant to ethnobotany and ethnopharmacology. The ethnobotanical portion will emphasize the importance of plants in the modern world, and on the influence of plant/people interactions in the evolution of civilizations and cultures, migrations of peoples and plants, cross-cultural contacts, wars, genocide, art, mythology, and religion, as well as topics on the traditional uses of plants by indigenous peoples. Ethnopharmacology combines aspects of botany, natural products chemistry, conventional pharmacology, pharmacognosy, anthropology, medicine, and even psychology and the comparative study of religions into a synthetic discipline whose subject matter is the human use of biologically active plants and animals as medicines, poisons, and "recreational" or ritual intoxicants. This course will cover both the ethnographic and scientific aspects of ethnopharmacology about equally. Emphasis will be placed on helping students to appreciate the importance of ethnobotanical investigations in the process of drug discovery and the evolution of medicine, and to develop a cross-cultural perspective on human interactions with drugs and toxins.  
Grading: 25% final exam, 20% quizzes, 15% written homework, 15% journal, 10% reflection paper, 15% in-class presentation.

CSPH 5511 Interdisciplinary Palliative Care: An Experiential Course in a Community Setting  
2 credit(s); prereq instr consent;  
Instructor: STAFF  
Description: Multidisciplinary teams of course participants will partner with interdisciplinary community hospice teams. They will participate in the delivery of care to patients in a variety of settings. This course will also include a series of seminars, employing self-analysis and case studies to further the participants' appreciation of and expertise in palliative care.

CSPH 5522 Therapeutic Horticulture  
3 credit(s); prereq 5101 or Hort 5072 or instr consent;  
Instructor: Larson, Jean Marie  
Description: This course is designed to provide a evidence-based understanding of the central elements of therapeutic horticulture in the context of multiple health care settings. Students will develop an understanding of the history, principles, precepts, and practical application of therapeutic horticulture. At each session students will investigate the current research of therapeutic horticulture as treatment intervention in relation to various target populations. These findings will be analyzed and synthesized as it pertains to the focus of target population.

CSPH 5533 Introduction to Energy Healing  
2 credit(s); prereq Jr or Sr or grad student or instr consent;  
Instructor: STAFF  
Description: This course will introduce students to healing techniques that use energetic systems in the body to enhance the body's ability to heal. Therapeutic Touch, Healing Touch, Reiki, acupuncture, reflexology, magnets, homeopathy, and many other modalities will be explored. Scientific theories...
explaining the mechanisms of energetic medicine and ways to measure energy will be investigated. Students will interact with practitioners of energy healing and describe the outcomes of such a practice.

**CSPH 5535 Reiki Healing**

S-N only, 1 credit(s); prereq Jr or sr or grad student or instr consent;
Instructor: Ringdahl, Deborah Rene
**Description:** Students will learn the history, principles, precepts, and practical application of Reiki energy healing. Alternative energy healing modalities and current research findings will be discussed. Following activation of the Reiki energy, participants will learn the hand positions used to perform a treatment. A portion of each class meeting will be used to provide Reiki treatments and to discuss findings.

**CSPH 5536 Advanced Reiki Healing: Level II**

S-N only, 1 credit(s); prereq 5535, instr consent;
Instructor: Ringdahl, Deborah Rene
**Description:** Students will learn advanced principles and application of Reiki energy healing. The four levels of healing will be further explored, with emphasis on healing at the spiritual level. Following activation of the Reiki energy, participants will learn the energy symbols that allow for energy transfer through space and time. Students will learn to use second level Reiki energy for both distance healing and the standard Reiki treatment. A portion of each class meeting will be used to provide Reiki treatments and to discuss findings. Current literature and research findings will also be discussed.

**CSPH 5541 Emotional Healing and Happiness: Eastern and Western Approaches to Transforming the Mind**

2 credit(s); prereq Sr or grad student or instr consent;
Instructor: Young, Merra Lee
**Description:** Student may contact the instructor or department for information.

**CSPH 5555 Introduction to Body and Movement-based Therapies**

2 credit(s); prereq Jr or sr or grad student or instr consent;
Instructor: Nordstrom-Loeb, Barbara E
**Description:** This course will cover the basic theories and approaches of selected Somatic Therapies, including dance, movement and body-based therapies. It will include 1) historic and theoretical perspectives on the use of movement, dance and somatic re-patterning, 2) demonstrations of specific techniques, and 3) application of techniques to specific populations and settings. The experiential part of the course will include individual, partner and group exercises intended to embody and deepen the topics covered in the class.

**CSPH 5601 Music, Health and Healing**

2 credit(s); prereq Jr or sr or grad student or instr consent;
Instructor: Heiderscheit PhD, Annie Lynne
**Description:** This course provides an in-depth exploration of the music in medicine, including music therapy, music medicine and music psychotherapy practices, techniques and interventions. There will be explication of the hypotheses and rationale related to interventions, and an exploration of related research.

**CSPH 5701 Fundamentals of Health Coaching I**

A-F only, 4 credit(s); prereq Admitted to Complementary Therapies and Healing Practice certificate program’s health coaching track or instr consent;
Instructor: Lawson MD, Karen Lynn
**Description:** Please contact department or instructor for further information. There will be a $300 course fee associated with this course.

**CSPH 5703 Advanced Health Coaching Practicum**

A-F only, 3 credit(s); prereq 5101, 5102, 5701, 5702, admitted to Postbaccalaureate Certificate in Complementary Therapies/Healing Practices Health Coaching Track;
Instructor: Gorman, Rebecca Sue
**Description:** Student may contact the instructor or department for information.

**CSPH 5704 Business of Health Coaching**

A-F only, 1 credit(s); prereq 5101, 5102, 5701, 5702, admitted to postbaccalaureate certificate in complementary therapies/healing practices health coaching track;
Instructor: Rae, Michele
**Description:** Student may contact the instructor or department for information.

**CSPH 5711 Optimal Healing Environments**

3 credit(s); prereq Jr or sr or grad student or instr consent;
Instructor: Kreitzer, Mary Jo
**Description:** Student may contact the instructor or department for information.

**CSPH 8191 Independent Study in Complementary Therapies and Healing Practices**

1-6 credit(s), max credits 6, 1 completion allowed; prereq instr consent;
Instructor: Cameron PhD, Miriam Elaine
**Description:** Student may contact the instructor or department for information.

**Chemical Engineering**

151 Amundson Hall

**CHEN 1001 Advances in Chemical Engineering and Materials Science**

S-N only, 1 credit(s), max credits 2, 1 completion allowed; prereq Recommended for [chemical engineering, materials science/engineering] majors; Credit will not be granted if credit has been received for: MATS 1001; Instructor: Mc Cormick, Alon Victor
**Description:** Student may contact the instructor or department for information.

**CHEN 2001 Material and Energy Balances**

A-F only, 4 credit(s); prereq [CHEM 2301 or Concurrent registration is required (or allowed) in CHEM 2301]. [MATH 2374 or Concurrent registration is required (or allowed) in MATH 2374 or equiv], [PHYS 1302 or Concurrent registration is required (or allowed) in PHYS 1302]; Instructor: Bhan, Aditya
**Description:** Student may contact the instructor or department for information.

**CHEN 3005 Transport Phenomena: Momentum and Heat**

A-F only, 4 credit(s); prereq [4001 or 2001 or [transfer student, dept consent]], upper div ChEn major; Instructor: Smyrl, William H
**Description:** Student may contact the instructor or department for information.

**CHEN 3041 Industrial Assignment I**

A-F only, 2 credit(s); prereq ChEn upper Div, completion of required courses in ChEn prog through fall sem of 3rd yr, GPA of at least 2.80, registered in co-op prog; Credit will not be granted if credit has been received for: MATS 3041; Instructor: Shores, David A
**Description:** Student may contact the instructor or department for information.

**CHEN 3045 Chemical Engineering Industrial Internship**

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
A-F only, 1 credit(s), max credits 2; prereq Plan approved by [supervisor, faculty internship co-op coordinator], report signed by industrial supervisor describing engineering work completed;
    Instructor: Shores, David A
    Description: Student may contact the instructor or department for information.

CHEN 3101 Chemical Engineering Thermodynamics
A-F only, 4 credit(s); prereq [[2001 or 4001 or [CHEM 3501, transfer student]] [upper div ChEn major or dept consent] credit will not be granted if credit already received for: ChEn 4101;
    Instructor: Morse, David Clark
    Description: Student may contact the instructor or department for information.

CHEN 3701 Introduction to Biomolecular Engineering
A-F only, 3 credit(s); prereq [4001 or equiv], [Chen 2302 or Concurrent registration is required (or allowed) in Chen 2302, [Math 2373 or equiv]; high school biology recommended;
    Instructor: Kokkoli, Efthymiou
    Description: Student may contact the instructor or department for information.

CHEN 4041 Industrial Assignment II
A-F only, 2 credit(s); prerequisite 3041, completion of required courses in ChEn prog through fall sem of 4th year, GPA of at least 2.80, registration in co-op prog; Credit will not be granted if credit has been received for: MATS 4041;
    Instructor: Shores, David A
    Description: Student may contact the instructor or department for information.

CHEN 4401W Senior Chemical Engineering Lab
A-F only, 3 credit(s); prerequisite [3005 or 4005, [3006 or 4006], [3101 or 4101], [3102 or 4102], [2001 or 4001], [3201 or 4201], 3401 CHEM 2311, [2121 or CHEM 4121], English composition requirement, upper div ChEn major] or dept consent ; Meets CLE req of Writing Intensive;
    Instructor: Caretta, Raul Alberto
    Description: Student may contact the instructor or department for information.

CHEN 4501W Chemical Engineering Process Design
3 credit(s); prerequisite [4005, 4006, 4101, 4102, 4001, 4201, Chem 2311, Chem 4121, fr writing requirement, upper div ChEn major] or dept consent ; Meets CLE req of Writing Intensive;
    Instructor: Derby, Jeffrey Jay
    Description: Student may contact the instructor or department for information.

CHEN 4593 Directed Study
OPT No Aud, 1-4 credit(s), max credits 6, 3 completions allowed; prerequisite ChEn major upper division, instr consent ; Instructor: STAFF
    Description: Directed study under faculty supervision. Student must meet with faculty supervisor before registering to get permission to pursue directed study, arrange study project, grading option, number of credits, and final report requirements.

CHEN 4594 Directed Research
OPT No Aud, 1-4 credit(s), max credits 6, 3 completions allowed; prerequisite instr. Consent Upper div ChEn;
    Instructor: STAFF
    Description: Independent laboratory research under faculty supervision. Student should meet with faculty supervisor before registering to get permission to pursue directed research, arrange research project, number of credits, grading option, and final report requirements.

CHEN 4601 Process Control
A-F only, 3 credit(s); prerequisite [3102 or 4102], [upper div ChEn major or dept consent];
    Instructor: Derby, Jeffrey Jay
    Description: Student may contact the instructor or department for information.

CHEN 4701 Advanced Undergraduate Applied Math I: Linear Analysis
A-F only, 3 credit(s); prerequisite [3102 or 4102], ChEn major upper div; Credit will not be granted if credit has been received for: CHEN 8201;
    Instructor: Diao, Li, Prodromos
    Description: Student may contact the instructor or department for information.

CHEN 4704 Advanced Undergraduate Physical Rate Processes I: Transport
A-F only, 3 credit(s); prerequisite [3005 or 4005], ChEn major upper div;
    Instructor: Cussler, Edward Jr.

CHEN 4707 Advanced Undergraduate Statistical Thermodynamics and Kinetics
A-F only, 3 credit(s); prerequisite ChEn 3005 or 4005, 3101 or 4101, CHEM 3501, CHEM 3502, ChEn major upper div;
    Instructor: Kaznessis, Yiannis
    Description: Student may contact the instructor or department for information.

CHEN 5551 Survey of Renewable Energy Technologies
A-F only, 3 credit(s); prerequisite [Upper div or instr consent], basic knowledge of chemistry, thermodynamics;
    Instructor: Schmidt, Lanny D
    Description: Student may contact the instructor or department for information.

CHEN 5771 Colloids and Dispersions
A-F only, 3 credit(s); prerequisite Physical chemistry;
    Instructor: Lodge, Timothy P
    Description: Student may contact the instructor or department for information.

CHEN 8201 Applied Mathematics I: Linear Analysis
A-F only, 3 credit(s); prerequisite Chemical engineering grad student or instr consent; Credit will not be granted if credit has been received for: CHEN 4701;
    Instructor: Diao, Li, Prodromos
    Description: Student may contact the instructor or department for information.

CHEN 8221 Synthetic Polymer Chemistry
A-F only, 4 credit(s); prerequisite [Undergrad organic chemistry course, undergrad physical chemistry course] or instr consent ; Credit will not be granted if credit has been received for: CHEM 4221;
    Instructor: Hillmyer, Marc Andrew
    Description: Student may contact the instructor or department for information.

CHEN 8301 Physical Rate Processes I: Transport
A-F only, 3 credit(s); prerequisite instr consent;
    Instructor: Cussler, Edward Jr.
    Description: Student may contact the instructor or department for information.

CHEN 8401 Physical and Chemical Thermodynamics
A-F only, 3 credit(s); prerequisite [Undergraduate [engineering course or chemistry course in thermodynamics], Chemical engineering grad student] or instr consent;
    Instructor: Aydil, Eray S
    Description: Student may contact the instructor or department for information.
CHEN 8402 Statistical Thermodynamics and Kinetics
A-F only, 3 credit(s); prereq Chemical engineering grad student or instr consent;
Instructor: Kaznessis, Yiannis
Description: Student may contact the instructor or department for information.

CHEN 8900 Seminar
S-N only, 1 credit(s);
Instructor: Kaznessis, Yiannis
Description: Student may contact the instructor or department for information.

CHEN 8993 Directed Study
1-12 credit(s), max credits 12, 1 completion allowed;
Instructor: Kaznessis, Yiannis
Description: Student may contact the instructor or department for information.

CHEN 8994 Directed Research
1-12 credit(s), max credits 12, 1 completion allowed;
Instructor: Kaznessis, Yiannis
Description: Student may contact the instructor or department for information.

Chemical Physics
139 Smith Hall

CHP8 8601 Seminar: Modern Problems in Chemical Physics
S-N only, 1 credit(s), max credits 2; prereq Grad chem physics major or instr consent;
Instructor: Siepmann, Iija
Description: Student may contact the instructor or department for information.

Chemistry
139 Smith Hall

CHEM 1015 Introductory Chemistry: Lecture
3 credit(s); prereq [High school chemistry or equiv], two yrs high school math, not passed chem placement exam. Internet access; high school physics recommended CHEM 1015 is a 3-credit, lecture-only course, with the lectures delivered online via WebVista, and exams taken in person on campus. Internet access is required. Students who will go on to take CHEM 1021 should take CHEM 1015 only. Students who will NOT be continuing on to CHEM 1021 and need to fulfill the Physical Science/Lab core requirement need take the 1-credit lab course CHEM 1017 either concurrently or consecutively. This course will NOT fulfill the Physical Science/Lab core requirement unless the CHEM 1017 lab course is completed either concurrently or consecutively.;
Instructor: STAFF
Description: Chem 1015 is an undergraduate introductory chemistry course. It may meet a chemistry or science requirement or it may serve as a bridge between high school chemistry and CHEM 1021. This course provides a broad survey of chemistry, including an introduction to organic chemistry. Additional topics include matter and energy; measurements in chemistry; ionic and molecular compounds; chemical reactions and chemical equilibrium; gases, liquids, solids, and solutions; acids and bases; and nuclear chemistry.
Style: 100% Lecture
Grading: 5% problem solving, 95% three mid-term exams and a final exam

CHEM 1017 Introductory Chemistry: Laboratory
A-F only, 1 credit(s); prereq [1015 or Concurrent registration is required (or required in 1015), dept consent credit will not be granted if credit received for: 1011; CHEM 1017 is a 1-credit lab-only course. This course is not intended for students who are planning to take CHEM 1021. Intended only for students who need the course to fulfill the Physical Science/Lab requirement, and are taking CHEM 1015 either concurrently or consecutively. This course will NOT fulfill the Physical Science/Lab core requirement, unless CHEM 1015 is completed either concurrently or consecutively.;
Instructor: STAFF
Description: Registration by department permission only. See staff in 115 Smith Hall or call 612-624-0026. CHEM 1017 is identical to the lab for CHEM 1011, but students do not attend any lecture or take any exams. Intended only for students who have taken the lecture-only course CHEM 1015, and later determine that taking the lab is now required.
Style: 100% Laboratory.

CHEM 1021 Chemical Principles I
4 credit(s); prereq Grade of at least C- in [1011 or 1015] or passing placement exam; intended for science or engineering majors Note: Students who have previously received a grade of C- or better and wish to repeat this course should not register for it during the registration queue. If they do they may have their registration canceled. They will be allowed to register on a space available basis, during open enrollment.; Credit will not be granted if credit has been received for: CHEM 1031H; Meets CLE req of Physical Sciences;
Instructor: STAFF
Description: Chem 1021 and Chem 1022 are introductory undergraduate chemistry courses with lab. Lectures include chemical demonstrations. Together these two courses prepare students for majors in science, engineering, and the health sciences. Topics include atoms, molecules, and ions; types of chemical reactions and chemical stoichiometry; thermochemistry; atomic structure and the periodic table; ionic and covalent bonding; molecular shapes; an introduction to organic chemistry and polymers; the nature of gases, liquids and solids.
Style: 50% Lecture, 50% Laboratory.
Grading: 20% laboratory evaluation, 80% other evaluation. Mid-term exams, final exam, problem sets

CHEM 1022 Chemical Principles II
4 credit(s); prereq Grade of at least C- in 1021 or equiv Note: Students who have previously received a grade of C- or better and wish to repeat this course should not register for it during the registration queue. If they do they may have their registration canceled. They will be allowed to register on a space available basis, during open enrollment.; Credit will not be granted if credit has been received for: CHEM 1032H; Meets CLE req of Physical Sciences;
Instructor: STAFF
Description: Chem 1022 is an introductory undergraduate chemistry course with lab. Together, Chem 1021 and Chem 1022 prepare students for majors in science, engineering, and the health sciences. Lectures include chemical demonstrations. Major topics are properties of solutions; chemical kinetics, the study of the rates and mechanisms of chemical reactions; chemical equilibrium in the gas phase; equilibria in aqueous solutions, including acid-base equilibria; entropy and free energy; electrochemistry; transition metals and coordination chemistry; and selected topics. Environmental issues related to course topics are an integral part of this course. For example, the discovery of the depletion of the stratospheric ozone layer by chlorofluorocarbons (CFCs) is an important application of chemical kinetics.
Style: 50% Lecture, 50% Laboratory.
Grading: 20% laboratory evaluation, 80% other evaluation. Mid-term exams, final exam, problem sets

CHEM 1031H Honors Chemistry I
A-F only, 4 credit(s); prereq Honors student and permission of University Honors Program; Credit will not be granted if credit has been received for: CHEM 1021; Meets CLE req of Physical Sciences;
Instructor: STAFF
Description: Credit will not be granted if credit received for: 1011; CHEM 1017 is a 1-credit lab-only course. This course is not intended for students who are planning to take CHEM 1021. Intended only for students who need the course to fulfill the Physical Science/Lab requirement, and are taking CHEM 1015 either concurrently or consecutively. This course will NOT fulfill the Physical Science/Lab core requirement, unless CHEM 1015 is completed either concurrently or consecutively.;
Instructor: STAFF
Description: Registration by department permission only. See staff in 115 Smith Hall or call 612-624-0026. CHEM 1017 is identical to the lab for CHEM 1011, but students do not attend any lecture or take any exams. Intended only for students who have taken the lecture-only course CHEM 1015, and later determine that taking the lab is now required.
Style: 100% Laboratory.

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Schedule.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online University of Minnesota - Course Guide for Twin Cities Campus Fall 2011.

CHEM 2101 Introductory Analytical Chemistry Lecture 3 credit(s); prereq 1022 or equiv;
Instructor: STAFF
Description: Primarily for chemistry majors. Methods/concepts of measurement by chemical/instrumental analysis, including titrimerity, quantitative spectrophotometric analysis, chromatographic separations, equilibrium/rate methods.
Style: 100% Lecture.
Grading: 10% problem solving, 90% other evaluation. Mid-term exams and final exam

CHEM 2111 Introductory Analytical Chemistry Lab 2 credit(s); prereq 2101 or concurrent enrollment 2101;
Instructor: STAFF
Description: Lab for CHEM 2101. High precision methods, acidimetry and complexometry, single and multicomponent analysis by spectrophotometry, analysis of mixtures by ion exchange and gas chromatography, enzymatic and rate methods.
Style: 25% Lecture, 75% Laboratory.
Grading: 10% final exam, 5% quizzes, 85% laboratory evaluation.

CHEM 2301 Organic Chemistry I 3 credit(s); prereq Grade of at least C- in [1022 or 1032H or equiv] or [grade of at least B in 1031H, Concurrent registration is required (or allowed) in 1032H] Note: Students who have previously received a grade of C- or better and wish to repeat this course should not register for it during the registration queue. If they do they may have their registration canceled. They will be allowed to register on a space available basis, during open enrollment.;
Instructor: STAFF
Description: Important classes of organic compounds, their constitutions, configurations, conformations, and reactions. Relationships between molecular structure and chemical reactivity/properties. Spectroscopic characterization of organic molecules.
Style: 100% Lecture.
Grading: 100% other evaluation. 4 Midterm Exams and a Final Exam
Exam Format: Mix of multiple choice and written exams

CHEM 2302 Organic Chemistry II 3 credit(s); prereq Grade of at least C- in 2301;
Instructor: STAFF
Description: Reactions, synthesis, and spectroscopic characterization of organic compounds, organic polymers, and biologically important classes of organic compounds such as lipids, carbohydrates, amino acids, peptides, proteins, and nucleic acids.
Style: 100% Lecture.
Grading: 100% other evaluation. 4 Mid-Term Exams and a Final Exam
Exam Format: Mix of multiple choice and written questions

CHEM 2311 Organic Lab 4 credit(s); prereq Grade of at least C- in 2302 or Concurrent registration is required (or allowed) in 2302;
Instructor: Wissinger,Jane E.
Description: This course is designed for undergraduates in the health and science fields that need to fulfill the undergraduate organic chemistry laboratory requirement. It is to be taken after the Organic I lecture course 2301, and concurrently or subsequent to Organic lecture course 2302. The 2311 course is one-semester in length, worth 4 credits, and equivalent to the usual two semester organic laboratory courses taught at other institutions. In the course, interesting and relevant experiments are used to teach the techniques used in the organic laboratory to study, synthesize, isolate, and purify organic compounds. A wide array of instruments including IR, NMR, and GC are used for analysis and computers are used to study molecular conformations and chemical properties. Molecules studied include analgesics, flavors, natural products, dyes, recyclable polymers, and chemiluminescent compounds. Experiments are presented in a manual written by Wissinger and a laboratory techniques textbook (&quot;Pavia&quot;) is required. Results are recorded both in report and worksheet formats. Overall, the objective is to give the students hands-on experience illustrating chemistry they learned in lecture, teach problem-solving skills, and demonstrate the value of organic chemistry in our daily lives.
Style: 10% Lecture, 90% Laboratory.
Grading: 74% reports/papers, 9% quizzes, 17% other evaluation. preparation and technique

CHEM 2312H Honors Organic Lab

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
A-F only, 5 credit(s); prereq [2301 or Concurrent registration is required (or allowed) in 2301], [Chem or ChemE or BioC] major, instr consent; Instructor: Hoye, Thomas R. Description: Honors organic chemistry laboratory to take the place of 2311 and 4311.

CHEM 2910 Special Topics in Chemistry
S-N only, 1 credit(s), max credits 6, 6 completions allowed; prereq 1 sem 1xxx chemistry or instr consent; Instructor: Stathopoulos, Stephanie M Description: Student may contact the instructor or department for information.

CHEM 2910H Special Topics in Chemistry
S-N only, 1 credit(s), max credits 6, 6 completions allowed; prereq One sem 1xxx chemistry or instr consent; Instructor: Stathopoulos, Stephanie M Description: Student may contact the instructor or department for information.

CHEM 4001 Chemistry of Plant Materials
A-F only, 4 credit(s); prereq 2302, [jr or sr or instr consent ]; Instructor: Tschirner, Ulrike Waltraud Description: Chemistry of cellulose, hemicellulose, lignin, extractives, proteins and other plant materials. About half of course focuses on fundamentals, including building blocks of these natural polymers and typical reactions. Remaining course focuses on applications related to these materials (chemicals from biomass, cellulose ethanol, biodiesel, biodegradable plastics, rayon, papermaking fibers, etc.) Style: 70% Lecture, 30% Discussion. Grading: 100% other evaluation. Based on 6 quizzes, 6 homeworks, final exam

CHEM 4011 Mechanisms of Chemical Reactions
3 credit(s); prereq [2302, 3501] or equiv; Instructor: STAFF Description: "Mechanisms of Chemical Reactions" is intended to prepare you to (1) elucidate the mechanisms of chemical reactions based on kinetic and thermodynamic principles and collected data, and (2) be able to evaluate mechanistic arguments made in the literature. The course is meant to be broadly applicable to many types of chemistry - organic, physical, materials, computational, etc. - and will focus on basic principles of reactions rather than specific kinds of molecules. Style: 100% Lecture. Grading: 67% mid exam, 33% problem solving.

CHEM 4094V Directed Research
1-5 credit(s), max credits 75, 15 completions allowed; Meets CLE req of Writing Intensive; Instructor: Stathopoulos, Stephanie M Description: Student may contact the instructor or department for information.

CHEM 4094W Directed Research
1-5 credit(s), max credits 75, 15 completions allowed; prereq Any 3xxx or 4xxx chem course, instr consent; Meets CLE req of Writing Intensive; Instructor: Stathopoulos, Stephanie M Description: Student may contact the instructor or department for information.

CHEM 4101 Modern Instrumental Methods of Chemical Analysis Lecture
A-F only, 3 credit(s); prereq 2101, 2111, 2311, 3501; Instructor: STAFF Description: Basic electronic, optical, computer technologies employed in design of chemical instrumentation. Advanced topics in spectroscopy (e.g., FT-nmr, FT-IR, atomic absorption/emission). Electrochemistry. Mass spectrometry. Style: 100% Lecture. Grading: 30% mid exam, 30% final exam, 7% special projects, 15% quizzes, 15% problem solving, 3% other evaluation. extra materials

CHEM 4201 Materials Chemistry
3 credit(s); prereq [3502 or equiv], 4701 or instr consent; Credit will not be granted if credit has been received for: CHEM 8201; Instructor: STAFF Description: Crystal systems/unit cells, phase diagrams, defects/interfaces, optical/dielectric properties, electrical/thermal conductivity, X-ray diffraction, thin film analysis, electronic structure, polarons/phonons, solid state chemistry, liquid/molecular crystals, polymers, magnetic/optical materials, porous materials, ceramics, piezoelectric materials, biomedical materials, catalysts. Style: 100% Lecture. Grading: 31% mid exam, 38% final exam, 15% quizzes, 16% problem solving.

CHEM 4221 Introduction to Polymer Chemistry
3 credit(s); prereq [2302, 3501] or instr consent; Credit will not be granted if credit has been received for: MATS 5221; Instructor: Hillmyer, Marc Andrew Description: ?Polymers will continue to enable essential development in emerging technologies that are critical to our society and infrastructure? is a quote from a recent National Science Foundation workshop on Polymer Science and Engineering. Polymers are fascinating materials used in everyday applications such as packaging, paints, and pants. The also find tremendous use in advanced technologies ranging from microelectronics to biomedicine. Chemists play a significant role in advancement of polymer science through the synthesis of new materials and their molecular and morphological characterization. If you are interested in the world of polymers, ?Introduction to Polymer Chemistry? would be an excellent starting point. This course will cover the basic principles of polymer chemistry with an emphasis on their synthesis and molecular characterization. Topics covered will include various polymerization techniques (or how you get from small organic molecules to long-chain macromolecules), the statistics of polymerization processes, reaction mechanisms, how to control chain length and comonomer incorporation, and how to measure molar mass. Contemporary polymerization methods will be emphasized and practical applications of these ubiquitous materials will be interweaved throughout the course. You can expect a mixture of organic reaction mechanisms, kinetics and thermodynamics of polymerizations, and some statistical analysis. The prerequisites for this course are Organic Chemistry II (CHEM 2302) & Introduction to Thermodynamics, Kinetics, and Statistical Mechanics (CHEM 3501). We will use the recently published book ?Polymer Chemistry? by Hiemenz and Lodge and will cover the first 5 chapters of that book: (1) Introduction to Chain Molecules; (2) Step-Growth Polymerization; (3) Chain-Growth Polymerization; (4) Controlled Polymerization; (5) Copolymers, Microstructure, and Stereoregularity. Other complementary topics will be included throughout the semester. Style: 100% Lecture. Grading: 60% mid exam, 25% final exam, 15% written homework.

CHEM 4311W Advanced Organic Chemistry Lab
2 credit(s); prereq 2311; Meets CLE req of Writing Intensive; Instructor: STAFF Description: Reactions, techniques and instrumental methods used in modern synthetic organic chemistry. Style: 10% Lecture, 90% Laboratory. Grading: 100% laboratory evaluation.

CHEM 4321 Organic Synthesis
3 credit(s); prereq [2302 or equiv], 3501, instr consent; Instructor: STAFF Description: Fundamental concepts, reactions, reagents, structural/stereochemical issues, and mechanistic skills for organic chemistry.

CHEM 4361 Interpretation of Organic Spectra
3 credit(s); prereq [2302 or equiv], 3501, instr consent; Instructor: STAFF Description: Application of nuclear magnetic resonance, mass,
ultraviolet, and infrared spectral analyses to organic structural problems.

**Style:** 100% Lecture.

**Grading:** 60% mid exam, 20% final exam, 20% problem solving.

**CHEM 4411 Introduction to Chemical Biology**
3 credit(s); prereq [2302 or equiv]; 3501;
Instructor: STAFF
Description: Chemistry of amino acids, peptides, proteins, lipids, carbohydrates, and nucleic acids; topics will include structure, nomenclature, synthesis, and reactivity, as well as an overview of techniques used to characterize these biomolecules.

**Style:** 100% Lecture.

**Grading:** 30% mid exam, 20% final exam, 20% class participation, 30% problem solving.

**CHEM 4502 Introduction to Quantum Mechanics and Spectroscopy**
A-F only, 3 credit(s); prereq [1022 or 1032H], [MATH 2263 or Concurrent registration is required (or allowed) in MATH 2263 or MATH 2374 or Concurrent registration is required (or allowed) in MATH 2374 or MATH 2243 or Concurrent registration is required (or allowed) in MATH 2243 or MATH 2373 or Concurrent registration is required (or allowed) in MATH 2373], [PHYS 1302 or PHYS 1402V];
Instructor: Gagliardi, Laura
Description: Student may contact the instructor or department for information.

**CHEM 4511W Advanced Physical Chemistry Lab**
2 credit(s); prereq 3501-3502, chemistry major; Meets CLE req of Writing Intensive;
Instructor: STAFF
Description: Experiments illustrating principles and methods of thermodynamics, reaction kinetics, and quantum mechanics.

**Style:** 20% Lecture, 80% Laboratory.

**Grading:** 100% laboratory evaluation.

**CHEM 4701 Inorganic Chemistry**
3 credit(s); prereq [2311 or Concurrent registration is required (or allowed) in 2311], [3501 or Concurrent registration is required (or allowed) in 3501 or 3502 or Concurrent registration is required (or allowed) in 3502];
Instructor: STAFF
Description: Introduction to inorganic chemistry at an advanced level. Periodic trends. Structure and bonding concepts in compounds where s and p electrons are important. Descriptive chemistry of solids and transition metal compounds. Emphasis on transition metal chemistry. Advanced topics in main group and materials chemistry.

**Style:** 100% Lecture.

**Grading:** 60% mid exam, 25% final exam, 15% quizzes.

**CHEM 4715 Physical Inorganic Chemistry**
3 credit(s); prereq 4701 or equiv, chem major or instr consent;
Instructor: Lu, Connie C
Description: This course will apply concepts such as molecular symmetry, group theory, and molecular orbital theory to the study of inorganic chemistry, with an emphasis on understanding the bonding and spectroscopy of transition metal complexes.

**CHEM 5245 Introduction to Drug Design**
A-F only, 3 credit(s); prereq 2302 or equiv; Credit will not be granted if credit has been received for: PHAR 6245;
Instructor: Wagner, Carston R
Description: Concepts that govern design/discovery of drugs. Physical, biorganic, medicinal chemical principles applied to explain rational design, mechanism of action drugs.

**CHEM 8011 Mechanisms of Chemical Reactions**
4 credit(s); prereq 2302 or equiv;
Instructor: Mann, Kent R
Description: Student may contact the instructor or department for information.

**CHEM 8025 Introduction to Graduate Research**
A-F only, 1-2 credit(s), max credits 2; prereq Grad student in chem;
Instructor: Bowser, Michael
Description: Student may contact the instructor or department for information.

**CHEM 8066 Professional Conduct of Chemical Research**
S-N only, 1 credit(s); prereq Chem grad student;
Instructor: Truhlar, Donald G
Description: Student may contact the instructor or department for information.

**CHEM 8151 Analytical Separations and Chemical Equilibria**
4 credit(s); prereq instr consent;
Instructor: Carr, Peter William
Description: Student may contact the instructor or department for information.

**CHEM 8152 Analytical Spectroscopy**
4 credit(s); prereq grad chem major or instr consent;
Instructor: Haynes, Christy L
Description: Student may contact the instructor or department for information.

**CHEM 8201 Materials Chemistry**
A-F only, 4 credit(s); prereq [4701, 3502] or instr consent; Credit will not be granted if credit has been received for:
CHEM 4201;
Instructor: Stein, Andreas
Description: Student may contact the instructor or department for information.

**CHEM 8221 Synthetic Polymer Chemistry**
4 credit(s); prereq [Undergrad organic chemistry course, undergrad physical chemistry course] or instr consent; Credit will not be granted if credit has been received for:
CHEM 4221;
Instructor: Hillmyer, Marc Andrew
Description: Student may contact the instructor or department for information.

**CHEM 8321 Organic Synthesis**
4 credit(s); prereq 2302 or equiv;
Instructor: Hoye, Thomas R.
Description: Student may contact the instructor or department for information.

**CHEM 8361 Interpretation of Organic Spectra**
4 credit(s); prereq 2302 or equiv;
Instructor: Taton, T. Andrew
Description: Student may contact the instructor or department for information.

**CHEM 8411 Introduction to Chemical Biology**
4 credit(s); prereq 2302 or equiv;
Instructor: Distefano, Mark Dewey
Description: Student may contact the instructor or department for information.

**CHEM 8541 Dynamics**
4 credit(s); prereq Undergrad physical chem course; Credit will not be granted if credit has been received for:
CHEM 5541;
Instructor: Truhlar, Donald G
Description: Newtonian, Lagrangian, and Hamiltonian dynamics, angular momentum and rotational motion, oscillations and normal modes of vibration, collision theory, and other topics in the classical dynamics of physical chemistry. Mathematical methods for physical chemistry, including vector calculus, the divergence theorem, Fourier series and transforms, differentials, delta functions, curvilinear coordinates, and orthogonal matrices.

**CHEM 8551 Quantum Mechanics I**
4 credit(s); prereq undergrad physical chem course; Credit
will not be granted if credit has been received for: CHEM 5551;
Instructor: Lipsky,Sanford
Description: Student may contact the instructor or department for information.

CHEM 8561 Thermodynamics, Statistical Mechanics, and Reaction Dynamics I
4 credit(s); prereq undergrad physical chem course;
Instructor: Siepmann,lija
Description: Student may contact the instructor or department for information.

CHEM 8601 Seminar: Modern Problems in Chemistry
S-N only, 1 credit(s); prereq grad chem major or instr consent;
Instructor: Pierre,Valerie Christine
Description: Student may contact the instructor or department for information.

CHEM 8602 Seminar Presentation: Modern Problems in Chemistry
A-F only, 1 credit(s); prereq grad chem major or instr consent;
Instructor: Pierre,Valerie Christine
Description: Student may contact the instructor or department for information.

CHEM 8715 Physical Inorganic Chemistry
4 credit(s); prereq 4701 or equiv, grad chem major or instr consent;
Instructor: Lu,Connie C
Description: Student may contact the instructor or department for information.

Chicano Studies
19 Scott Hall

CHIC 1275 Service Learning in the Chicano/Latino Community
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: CHIC 3275; Meets CLE req of Civic Life and Ethics;
Instructor: Ganley,Kathleen Marie
Description: This course is premised on the notion that there are many institutional and social constraints and limitations within schools that block equitable educational opportunities and outcomes for Latino students. It is also based on the idea that students who fail to learn in our schools and fail to graduate are our responsibility. In this course, you will be asked to think and act as you contribute to youth education. You will study the education of Chicanos/Latinos in the United States through the integration of academic materials, discussion, guest speakers and visits to the community while doing community service in an educational setting with Latino youth. Over the course of the semester, you will provide 36 hours of tutoring and mentoring in culturally grounded programs. You will analyze the education of Chicanos/Latinos while reflecting on issues such as equality, language usage, graduation statistics, college enrollment, various educational methodologies, special challenges faced by immigrants, and current legislation to create change. Students will also use what they learn in this course to affect legislative change. This course meets the Liberal Education Requirements in Civic Life and Ethics (theme).
Style: 20% Lecture, 40% Discussion. presentations, Web-CT
Grading: 20% reports/papers, 10% in-class presentation, 10% class participation, 10% problem solving, 50% other evaluation. tutoring at community site

CHIC 3507W Introduction to Chicana/o Literature
3 credit(s); Credit will not be granted if credit has been received for: ENGL 3507W; Meets CLE req of Diversity and Soc Justice US; meets CLE req of Literature; meets CLE req of Writing Intensive;
Instructor: Padilla,Yolanda Alicia
Description: Student may contact the instructor or department for information.

CHIC 3993 Directed Studies
1-9 credit(s), max credits 16, 16 completions allowed; prereq instr consent ;
Instructor: Mendoza,Louis Gerard
Description: Student may contact the instructor or department for information.

CHIC 4275 Theory in Action: Community Engagement in a Social Justice Framework
3 credit(s); Meets CLE req of Civic Life and Ethics;
Instructor: Sass Zaragoza,Lisa
Description: In this course, we examine theoretical frameworks for understanding social justice and social agency. We study identity theory, power, race, class and privilege and how these play out in our own lives, particularly as we interact and work within various community settings.. The majority of the class will focus on Latino worker’s experiences organizing within the global economy, particularly here in Minnesota. Students will spend at least 25 hours working with a community based group, organization, union, worker center or policy initiative learning through experience different models for movement building, advocacy and change.

CHIC 4901W Senior Paper
A-F only, 3 credit(s); Meets CLE req of Writing Intensive;
Description: This course is designed for the CASA SOL students. We will explore the history and development of Chicana/o and Latina/o social movements, political identities, and aesthetics. We will discuss the meaning of changing demographics and the role of Latinos/os in the global economy as both consumers and creators of culture. You will be challenged to identify, analyze, and evaluate your own social location in relation to others.
Style: 20% Lecture, 10% Film/Video, 50% Discussion, 20% Small Group Activities.
Grading: 20% reports/papers, 30% reflection paper, 25% in-class presentation, 25% class participation. In-class presentation is a group project designed to facilitate discussion.
CPSY 1904 Freshman Seminar: Global Perspectives: International & Cross-cult Studies of Childhood
1-3 credit(s), max credits 3, 1 completion allowed; prereq Fr; Meets CLE req of Global Perspectives;
Instructor: Maratosos,Michael P
Description: Student may contact the instructor or department for information.

CPSY 2301 Introductory Child Psychology
4 credit(s); prereq 4 cr intro psych; Credit will not be granted if credit has been received for: CPSY 3301;
Instructor: Heinrichs PhD,Marian R
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policies, including fee and financial aid restrictions. This course covers the period from conception through adolescence. The curriculum covers the principles and themes of development and is aligned closely with the textbook. To paraphrase the text: Development consists of age-related changes that are orderly, that is, change follows a logical sequence; cumulative, that is, each phase of development includes all the changes that occur before it; and directional, such that development always moves towards greater complexity. The challenge is to explain development. Our focus will be on research. We need to know how research happens, how it begins with a testable idea and then becomes real through observations or experiments with actual participants, and finally, how to think critically about the results and how this can impact policy.
Style: Online with handwritten exams
Grading: 15% mid exam, 15% final exam, 20% special projects, 50% written homework.
Exam Format: Supervised, in-person (not online) exams.

CPSY 2301 Introductory Child Psychology
4 credit(s); prereq 4 cr intro psych; Credit will not be granted if credit has been received for: CPSY 3301;
Instructor: Warren,Henriette
Description: This undergraduate survey course will examine social and cognitive development from the prenatal period through adolescence. The major goals include fostering an understanding of the usefulness of a developmental approach to psychological issues, and familiarizing students with current research and methodology in child psychology. This course emphasizes normal physical, cognitive, emotional, and social development. Class sessions will include a mixture of lectures, discussion, videos, and group activities.
Style: 80% Lecture, 10% Discussion. instructional videos
Grading: 50% mid exam, 20% final exam, 25% reports/papers, 5% class participation, 10% laboratory evaluation.
Exam Format: multiple choice

CPSY 3301 Introductory Child Psychology for Social Sciences
4 credit(s); Credit will not be granted if credit has been received for: CPSY 3301;
Instructor: Heinrichs PhD,Marian R
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policies, including fee and financial aid restrictions. In this course, we will learn about each phase of development, and address the factors that influence it. We will look to research to answer these questions, but the answers are not always clear. Consider these examples: Children raised in a home with domestic violence will have a high probability of negative outcomes, but how is it that some children show great resilience? We know that the early relationship that develops between the child and caregiver is essential to the healthy development of the child’s socio-emotional and cognitive functioning; what is the effect of mothers returning to work within the first year of a child’s life? Each of the issues is complex, and critical to our communities.
Style: Online with handwritten exams
Grading: 15% mid exam, 15% final exam, 4% reflection paper. Also: 8 essays--96% research projects--20% 1 research proposal--10%
Exam Format: Supervised, in-person (not online) exams

CPSY 3301 Introductory Child Psychology for Social Sciences
4 credit(s); Credit will not be granted if credit has been received for: CPSY 2301;
Instructor: Warren,Henriette
Description: This undergraduate survey course will examine social and cognitive development from the prenatal period through adolescence. The major goals include fostering an understanding of the usefulness of a developmental approach to psychological issues, and familiarizing students with current research and methodology in child psychology. This course emphasizes normal physical, cognitive, emotional, and social development. Class sessions will include a mixture of lectures, discussion, videos, and group activities.
Style: 80% Lecture, 10% Discussion. instructional videos
Grading: 40% mid exam, 20% final exam, 25% reports/papers, 5% class participation, 10% laboratory evaluation.
Exam Format: multiple choice

CPSY 3308 Introduction to Research Methods in Child Psychology
A-F only, 4 credit(s); prereq 2301, Psy 1001;
Instructor: Karatekin,Canan
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policy, fee, and financial aid restrictions. This course will help students gain an understanding of human development during the first two years of life. This includes both scientific and practical knowledge about development during infancy. The key areas covered in the course are: perceptual, motor, social, cognitive, and nervous-system development. Additionally, students will come to understand the strengths and limitations of the methods used in infancy research.
Style: Online with handwritten exams
Grading: 25% mid exam, 25% final exam, 15% special projects, 35% written homework.
Exam Format: Supervised, in-person exams.

CPSY 4302 Infant Development
A-F only, 4 credit(s); prereq 2301 or instr consent;
Instructor: Corrow,Sherry Leanna
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policy, fee, and financial aid restrictions. This course will help students gain an understanding of human development during the first two years of life. This includes both scientific and practical knowledge about development during infancy. The key areas covered in the course are: perceptual, motor, social, cognitive, and nervous-system development. Additionally, students will come to understand the strengths and limitations of the methods used in infancy research.
Style: Online with handwritten exams
Grading: 25% mid exam, 25% final exam, 15% special projects, 35% written homework.
Exam Format: Supervised, in-person exams.

CPSY 4334W Children, Youth in Society
A-F only, 4 credit(s); prereq 2301, Psy 1001;
Instructor: Yussen,Steve
Description: Student may contact the instructor or department for information.

CPSY 4341 Perceptual Development
3 credit(s); prereq 2301;
Instructor: Yonas,Albert
Description: Student may contact the instructor or department for information.

CPSY 4343 Cognitive Development
A-F only, 3 credit(s); prereq 2301;
CPSY 4345 Language Development and Communication
A-F only, 3 credit(s); prereq 2301;
Instructor: Sera PhD,Maria D
Description: This course is designed to introduce students to the study of language development. The course is organized into four sections: Speech Perception, Lexical Semantics, Syntax and Morphology, and Language and Cognition.
Style: 90% Lecture, 10% Discussion.
Grading: 40% mid exam, 40% final exam, 15% reports/papers, 5% class participation.
Exam Format: multiple choice and short answer

CPSY 4347W Senior Project
A-F only, 2 credit(s); prereq CPsy sr; Meets CLE req of Writing Intensive;
Instructor: Gunnar PhD,Megan R
Description: Student may contact the instructor or department for information.

CPSY 4994 Directed Research in Child Psychology
1-4 credit(s), max credits 8, 8 completions allowed; prereq 4 cr in CPsy, instr consent , dept consent ;
Instructor: STAFF
Description: This is an opportunity for students to assist in developmental research. Many opportunities are listed on our CPSY undergraduate advising board in Room 106. Possible tasks might include making phone calls to solicit subjects; scheduling and confirming appointments; updating information; filming subjects; coding data, entering data into a computer; tabulating data; analyzing data statistically; sitting with siblings during experiments; doing library research; collecting archival data. This list is not exhaustive. A contract and override are required to register. The student uses a contract as an opportunity to clarify opportunities, responsibilities, and desires, etc.
Style: 10% Discussion, 90% Laboratory.
Grading: 20% special projects, 70% laboratory evaluation, 10% problem solving.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPsy, CPsy honors, instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Cicchetti PhD,Dante
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPsy, CPsy honors, instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Maratosos,Michael P
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPsy, CPsy honors, instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Masten,Ann S.
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPsy, CPsy honors, instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Thomas,Kathleen M
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPsy, CPsy honors, instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Pick Jr,Herbert L
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPsy, CPsy honors, instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Yonas,Albert
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPsy, CPsy honors, instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Collins,W Andrew
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPsy, CPsy honors, instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Egeland,Byron R
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPsy, CPsy honors, instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Carlson,Stephanie M
Description: Student may contact the instructor or department for information.
CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPSy, CPSy honors, instr consent, dept consent; Meets CLE req of Writing Intensive;
Instructor: Benish,Amy Marie
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPSy, CPSy honors, instr consent, dept consent; Meets CLE req of Writing Intensive;
Instructor: Yussen,Steve
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPSy, CPSy honors, instr consent, dept consent; Meets CLE req of Writing Intensive;
Instructor: Gewirtz,Abigail
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPSy, CPSy honors, instr consent, dept consent; Meets CLE req of Writing Intensive;
Instructor: Reylounds,Arthur J.
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPSy, CPSy honors, instr consent, dept consent; Meets CLE req of Writing Intensive;
Instructor: Zelazo,Philip David
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPSy, CPSy honors, instr consent, dept consent; Meets CLE req of Writing Intensive;
Instructor: Koenig,Melissa
Description: Student may contact the instructor or department for information.

CPSY 4994V Directed Research in Child Psychology (Honors Thesis)
1-6 credit(s), max credits 6, 4 completions allowed; prereq 4 cr in CPSy, CPSy honors, instr consent, dept consent; Meets CLE req of Writing Intensive;
Instructor: Harnack,Stephanie M.
Description: Student may contact the instructor or department for information.

CPSY 5253 Facilitating Cognitive and Language Learning in Early Childhood Education
A-F only, 3 credit(s); prereq MEd student in ECE or instr consent credit will not be granted if credit received for: CI 5253;
Instructor: Murphy,Barbara Ann
Description: Student may contact the instructor or department for information.

CPSY 5281 Student Teaching in Early Childhood Education
S-N only, 1-6 credit(s), 1 completion allowed; prereq MEd student in early childhood ed or early childhood special ed credit will not be granted if credit received for: 5281;
Instructor: Murphy,Barbara Ann
Description: Student may contact the instructor or department for information.

CPSY 5413 Early Childhood and Public Policy
3 credit(s);
Instructor: Slawik,Nora B
Description: If you want to learn directly from legislators, early education professionals, economists, lobbyists and other social scientists about state, federal and international policies affecting young children and their families this class is essential. We will explore readings and expert speaker presentations on family, community and institutional roles in promoting children’s social, cognitive and emotional development and their acquisition of language and pre-literacy skills. This course illuminates the gaps between the science of early childhood development and how public policies support young children and their caregivers.

CPSY 5253 Facilitating Cognitive and Language Learning in Early Childhood Education
A-F only, 3 credit(s); prereq MEd student in ECE or instr consent credit will not be granted if credit received for: CI 5253;
Instructor: Murphy,Barbara Ann
Description: Student may contact the instructor or department for information.

CPSY 5518 Prevention and Intervention in Infant and Early Childhood Mental Health I
A-F only, 3 credit(s); prereq 5501, 5503, 5506, 5508;
Instructor: Schultz,Susan Kristine
Description: Student may contact the instructor or department for information.
CPSY 8301 Developmental Psychology: Cognitive Processes
4 credit(s); prereq Doctoral student, instr consent
Instructor: Thomas,Kathleen M
Description: Overview: This course will provide a general overview of the primary issues, methods, and findings in the field of cognitive development. We will examine the development of processes involved in perception, language, knowledge acquisition, reasoning, and the control of behavior, including consideration of the sociocultural context in which these processes develop. The course will begin with a review of some major theories of cognitive development and the empirical observations on which they are based. Current issues & findings will be introduced with reference to these theories. Some background in the scientific study of child development is assumed. Class Format: Typically, the instructors will lecture on Tuesday of each week and lead a seminar discussion on the same topic on Thursday. Students will be expected to participate in the seminar discussions.

CPSY 8311 Landmark Issues and Great Controversies in Child Development
S-N only, 2 credit(s); prereq CPSy doctoral student or instr consent
Instructor: Collins,W Andrew
Description: Student may contact the instructor or department for information.

CPSY 8321 Seminar in Teaching Developmental Psychology
1 credit(s); prereq CPSy doctoral student or instr consent
Instructor: Warren,Henriette
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Cicchetti PhD,Dante
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Maratos,Michael P
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Masten,Ann S.
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Georgieff,Michael K
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Thomas,Kathleen M
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Pick Jr,Herbert L
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Yonas,Albert
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Sera PhD,Maria D
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Crick,Nicki R
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Weinberg,Richard A
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Collins,W Andrew
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Egeland,Byron R
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent
Instructor: Gunnar PhD,Megan R
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq Doctoral student or instr consent

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
Instructor: Sroufe,L Alan
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq 
Doctoral student or instr consent ;
Instructor: Yussen,Steve
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq 
Doctoral student or instr consent ;
Instructor: Karatekin,Canan
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq 
Doctoral student or instr consent ;
Instructor: Gewirtz,Abigail
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq 
Doctoral student or instr consent ;
Instructor: Reynolds,Arthur J.
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq 
Doctoral student or instr consent ;
Instructor: Zelazo,Philip David
Description: Student may contact the instructor or department for information.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq 
Doctoral student or instr consent ;
Instructor: Carlson,Stephanie M
Description: Overview: This course will provide a general overview of the primary issues, methods, and findings in the field of cognitive development. We will examine the development of processes involved in perception, language, knowledge acquisition, reasoning, and the control of behavior, including consideration of the sociocultural context in which these processes develop. The course will begin with a review of some major theories of cognitive development and the empirical observations on which they are based. Current issues & findings will be introduced with reference to these theories. Some background in the scientific study of child development is assumed. Class Format: Typically, the instructors will lecture on Tuesday of each week and lead a seminar discussion on the same topic on Thursday. Students will be expected to participate in the seminar discussions.

CPSY 8994 Research Problems in Child Psychology
1-6 credit(s), max credits 24, 24 completions allowed; prereq 
Doctoral student or instr consent ;
Instructor: Karatekin,Canan
Description: Student may contact the instructor or department for information.

Instructor: Bloomquist PhD,Michael Leonard
Description: This course begins with a description of the characteristics, developmental course, and associated risk factors that are seen in children with aggression and conduct problems. The biological, parent/family, social/peer, and contextual (e.g., neighborhood, school, societal, etc.) causes and correlates will be reviewed. The major emphasis of the course is the delineation of a developmentally focused, multi-systemic model of evidence-based intervention that comprehensively focuses on reducing risks and promoting protective factors in child, parent/family, social/peer, and contextual life domains. This includes discussion of social competence training procedures, mental health interventions (including medications), and academic skills building strategies, parent and family skills training, and various school and community interventions. Multicomponent and coordinated service models of comprehensive intervention will be highlighted. Finally, the course will address strategies for engaging families in intervention, and making interventions culturally compatible.

Chinese
136 Klaeber Court

CHN 1011 Beginning Modern Chinese
6 credit(s); Credit will not be granted if credit has been received for: CHN 4001;
Instructor: Li,Chi-Ping
Description: Student may contact the instructor or department for information.

CHN 1015 Accelerated Beginning Modern Chinese
5 credit(s); prereq Oral/aural skills or speaker of other Chinese dialect recommended credit will not be granted if credit received for: 1011 or 1012;;
Instructor: Stone,Jin YaLiang
Description: Prerequisite: instructor consent; credit will NOT be granted if credit received for: 1011 or 1012;; 5 cr Instructor: Stone, Jin This course is designed for heritage speakers of Chinese and for students who have the basic skill of speaking Chinese. The course will focus on standard pronunciation, reading, and writing, and spend less time on grammatical explanation. The lectures cover Chinese characters and sentence structures. In the drill session, we will practice the skills of listening comprehension, speaking, reading, and writing. Since this is an accelerated course, we will cover the whole of first-year Chinese within one semester, and the pace of the course will be approximately one lesson every two days. By the end of the semester, students should be able to make fluent conversations in Chinese, recognize 600 Chinese characters, write 500 of them, and read texts that are clear and straightforward. The course URL is: http://www.all.umn.edu/chinese_language/Courses/class_list.html

Textbook: "Integrated Chinese": Level One, Part One and Part Two, by Tao-chung Yao, Yuehua Liu et al, published by Cheng & Tsui Company, 2nd Edition, 2005. Chinese Program URL: http://www.all.umn.edu/chinese_language Class time: 30% lecture, 60% discussion, 10% Video and other multi-media Work load: 10 pages of reading per week, 2-3 pages of writing per semester, exam(s), written homework Grade: 10% attendance and class participation, 5% vocabulary quizzes, 15% quizzes and tests, 10% homework, 30% Mid-term, 30% Final If you have any question regarding this course, please contact the instructor by sending an email to or by calling the instructor.

CHN 3021 Intermediate Modern Chinese
5 credit(s); prereq 1012 or 1015 or equiv or instr consent; 
Credit will not be granted if credit has been received for: CHN 4003;
Instructor: Wang,Ling
Description: Student may contact the instructor or department for information.

CHN 3031 Advanced Modern Chinese
CHN 3201 Chinese Calligraphy
2 credit(s);
Instructor: Zhang Hong
Description: A beginning course in Chinese Calligraphy.
Chinese language background is NOT required. Lectures include introducing various Chinese Calligraphy techniques and exposing students to Chinese Calligraphy history and the cultural background in general. Students will be taught to develop a sense of self-cultivation through practicing the art of Chinese Calligraphy. Exercises in the class will give students hands-on experience of proper use of Chinese brush and ink to perform Chinese calligraphy. Students will also have the opportunity to write a complete calligraphy art piece in terms of Chinese Couplets, Chinese Poems. In addition, students will be taught to understand the literature and meaning of the calligraphy projects. The Calligraphy book is written by the instructor.
Style: 30% Lecture, 10% Discussion. Classroom exercises, with instructor's coaching students individually.
Grading: 30% special projects, 30% written homework, 30% attendance, 10% class participation.

CHN 3290 Chinese Language Teaching Tutorial
S-N only, 1 credit(s), max credits 2; prereq Grade of A in 3032;
Instructor: Wang Ling
Description: Student may contact the instructor or department for information.

CHN 4001 Beginning Modern Chinese
3 credit(s); prereq Grad student; Credit will not be granted if credit has been received for: CHN 1011;
Instructor: Li Chi-Ping
Description: This course is designed for heritage speakers of Chinese and for students who have the basic skill of speaking Chinese. The course will focus on standard pronunciation, reading, and writing, and spend less time on grammatical explanation. The lectures cover Chinese characters and sentence structures. In the drill session, we will practice the skills of listening comprehension, speaking, reading, and writing. Since this is an accelerated course, we will cover the whole of first-year Chinese within one semester, and the pace of the course will be approximately one lesson every two days. By the end of the semester, students should be able to make fluent conversations in Chinese, recognize 600 Chinese characters, write 500 of them, and read texts that are clear and straightforward.
Course URL is: http://www.all.umn.edu/chinese_language/Courses/class_list.html
Textbook: "Integrated Chinese", Level One, Part One and Part Two, by Tao-chung Yao, Yuehua Liu et al, published by Cheng & Tsui Company, 2nd Edition, 2005. Chinese Program URL: http://www.all.umn.edu/chinese_language Class time: 30% lecture, 60% discussion, 10% Video and other multi-media Work load: 10 pages of reading per week, 2-3 pages of writing per semester, exam(s), written homework Grade: 10% attendance and class participation, 5% vocabulary quizzes, 15% quizzes and tests, 10% homework, 30% Mid-term, 30% Final If you have any question regarding this course, please contact the instructor by sending an email to or by calling the instructor.

CHN 4007 Advanced Modern Chinese
3 credit(s); prereq 4004, grad student;
Instructor: Li Chi-Ping
Description: This course is designed for heritage speakers of Chinese and for students who have the basic skill of speaking Chinese. The course will focus on standard pronunciation, reading, and writing, and spend less time on grammatical explanation. The lectures cover Chinese characters and sentence structures. In the drill session, we will practice the skills of listening comprehension, speaking, reading, and writing. Since this is an accelerated course, we will cover the whole of first-year Chinese within one semester, and the pace of the course will be approximately one lesson every two days. By the end of the semester, students should be able to make fluent conversations in Chinese, recognize 600 Chinese characters, write 500 of them, and read texts that are clear and straightforward.
Course URL is: http://www.all.umn.edu/chinese_language/Courses/class_list.html
Textbook: "Integrated Chinese", Level One, Part One and Part Two, by Tao-chung Yao, Yuehua Liu et al, published by Cheng & Tsui Company, 2nd Edition, 2005. Chinese Program URL: http://www.all.umn.edu/chinese_language Class time: 30% lecture, 60% discussion, 10% Video and other multi-media Work load: 10 pages of reading per week, 2-3 pages of writing per semester, exam(s), written homework Grade: 10% attendance and class participation, 5% vocabulary quizzes, 15% quizzes and tests, 10% homework, 30% Mid-term, 30% Final If you have any question regarding this course, please contact the instructor by sending an email to or by calling the instructor.

CHN 4003 Intermediate Modern Chinese
3 credit(s); prereq 4002, grad student; Credit will not be granted if credit has been received for: CHN 3021;
Instructor: Wang Ling
Description: Student may contact the instructor or department for information.

CHN 4005 Accelerated Beginning Modern Chinese
3 credit(s); prereq Grad student, instr consent; oral/aural skills or other Chinese dialect recommended credit will not be granted if credit received for: 1011, 1012;
Instructor: Stone, Jin
Description: This course is designed for heritage speakers of Chinese and for students who have the basic skill of speaking Chinese. The course will focus on standard pronunciation, reading, and writing, and spend less time on grammatical explanation. The lectures cover Chinese characters and sentence structures. In the drill session, we will practice the skills of listening comprehension, speaking, reading, and writing. Since this is an accelerated course, we will cover the whole of first-year Chinese within one semester, and the pace of the course will be approximately one lesson every two days. By the end of the semester, students should be able to make fluent conversations in Chinese, recognize 600 Chinese characters, write 500 of them, and read texts that are clear and straightforward.
Course URL is: http://www.all.umn.edu/chinese_language/Courses/class_list.html
Textbook: "Integrated Chinese", Level One, Part One and Part Two, by Tao-chung Yao, Yuehua Liu et al, published by Cheng & Tsui Company, 2nd Edition, 2005. Chinese Program URL: http://www.all.umn.edu/chinese_language Class time: 30% lecture, 60% discussion, 10% Video and other multi-media Work load: 10 pages of reading per week, 2-3 pages of writing per semester, exam(s), written homework Grade: 10% attendance and class participation, 5% vocabulary quizzes, 15% quizzes and tests, 10% homework, 30% Mid-term, 30% Final If you have any question regarding this course, please contact the instructor by sending an email to or by calling the instructor.
CHN 5040 Readings in Chinese Texts
A-F only, 3 credit(s), max credits 12, 4 completions allowed; prereq 4042 or equiv or instr consent.
Instructor: Zou,Zhen
Description: Prerequisite: 3-4 years of college Chinese or equivalent or instructor consent.
Instructor: Zou, Zhen
In the fall semester, the contents of the Chinese 5040 course include contemporary Chinese short stories, novels, and prose written since 1950 to the present, especially in the 1980s, 1990s, and 2000s, a peak time of Chinese literature since China’s reform and open to the world. These literary works explore various aspects of contemporary Chinese society, history, and culture, including social prejudices against the mentally and physically disadvantaged, the Anti-Rightist Movement, the Cultural Revolution, the drug problem, male-female relationships, education, parental love, traditional Chinese view of life, rape and sex, and hot issues discussed in Taiwan. Class discussion will focus on the use of the language, the social interpretation of the texts, and the Chinese cultural and philosophical messages found in those works. The course will be taught in standard Modern Chinese (Mandarin). Class time: 65% Discussion, 30% Reading, 5% Lab, film and internet. Work load: 5-10 Pages of reading per week, quizzes, 2 exams, oral reading presentation, and a final essay. Grade: 15% class participation, 15% quizzes, 20% midterm exam, 20% final exam, 10% reading presentation, 20% final essay. Exam format: Short answers and essay questions. Course URL: http://www.all.umn.edu/chinese_language

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: Allen, Joseph R
Description: Student may contact the instructor or department for information.

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: Zou, Zhen
Description: Student may contact the instructor or department for information.

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: McGrath, Jason
Description: Student may contact the instructor or department for information.

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: Rouzet, Paul F
Description: Student may contact the instructor or department for information.

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: Zou, Zhen
Description: Student may contact the instructor or department for information.

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: McGrath, Jason
Description: Student may contact the instructor or department for information.

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: Rouzet, Paul F
Description: Student may contact the instructor or department for information.

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: Zou, Zhen
Description: Student may contact the instructor or department for information.

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: McGrath, Jason
Description: Student may contact the instructor or department for information.

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: Rouzet, Paul F
Description: Student may contact the instructor or department for information.

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: Zou, Zhen
Description: Student may contact the instructor or department for information.

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: McGrath, Jason
Description: Student may contact the instructor or department for information.

CHN 5393 Directed Study 1-5 credit(s), max credits 18, 18 completions allowed; prereq instr consent, dept consent, college consent.
Instructor: Rouzet, Paul F
Description: Student may contact the instructor or department for information.
University of Minnesota - Course Guide for Twin Cities Campus

Fall 2011

Description: Student may contact the instructor or department for information.

CE 3402W Civil Engineering Materials
A-F only, 3 credit(s); prerequisite Grade of at least C- in [AEM 3031 or BBE 3001], IT; Meets CLE req of Writing Intensive; Instructor: Khazanovich, Lev
Description: Student may contact the instructor or department for information.

CE 3501 Environmental Engineering
A-F only, 3 credit(s); prerequisite Chem 1022, Phys 1302; Meets CLE req of Environment; Instructor: LaPara, Timothy M
Description: Student may contact the instructor or department for information.

CE 3502 Fluid Mechanics
A-F only, 4 credit(s); prerequisite [AEM 2012 or AEM 3031], Math 2373, [CSE or ForP major]; Instructor: Hill, Kimberly M
Description: Student may contact the instructor or department for information.

CE 3502 Fluid Mechanics
A-F only, 4 credit(s); prerequisite [AEM 2012 or AEM 3031], Math 2373, [CSE or ForP major]; Instructor: Hill, Kimberly M
Description: Student may contact the instructor or department for information.

CE 4000H Honors Research Seminar
A-F only, 1 credit(s), maximum credits 2; prerequisite Upper div CE; Credit will not be granted if credit has been received for: GEOE 4000H; Instructor: Barnes, Randal J
Description: Student may contact the instructor or department for information.

CE 4092H Honors Selected Reading
A-F only, 1 credit(s), maximum credits 2; prerequisite Upper div CE; Credit will not be granted if credit has been received for: GEOE 4092H; Instructor: Barnes, Randal J
Description: Student may contact the instructor or department for information.

CE 4094H Senior Honors Thesis
A-F only, 2 credit(s); prerequisite Upper div CE; Credit will not be granted if credit has been received for: GEOE 4094H; Instructor: Barnes, Randal J
Description: Student may contact the instructor or department for information.

CE 4102W Capstone Design
A-F only, 4 credit(s); prerequisite 4301, 4401, 4501, 4502; Meets CLE req of Writing Intensive; Instructor: Eickenberg, Paul Thomas
Description: Student may contact the instructor or department for information.

CE 4190 Engineering Co-op Assignment
S-N only, 2-6 credit(s), maximum credits 6, 1 completion allowed; prerequisite Upper div CE, approval of department co-op director; Instructor: Gulliver, John Stephen
Description: Style: Industry work assignment Grading: 100% reports/papers.

CE 4251 Pavement Analysis, Design, and Rehabilitation
4 credit(s); prerequisite [3201, 3301, 3402, upper div CSE] or grad student or instr consent; Instructor: Khazanovich, Lev
Description: Student may contact the instructor or department for information.

CE 4301 Soil Mechanics II
A-F only, 3 credit(s); prerequisite [3301 or GeoE 3301], upper div CSE or instr consent; Credit will not be granted if credit has been received for: GEOE 4301; Instructor: Gonella, Stefano
Description: Student may contact the instructor or department for information.

CE 4311 Rock Mechanics
A-F only, 4 credit(s); prerequisite 3301 or GeoE 3301 or instr consent; Instructor: Detournay, Emmanuel Michel
Description: Student may contact the instructor or department for information.

CE 4351 Groundwater Mechanics
A-F only, 3 credit(s); prerequisite [3502, [upper div CSE or grad student]] or instr consent; Credit will not be granted if credit has been received for: GEOE 4351; Instructor: Strack PhD, Otto D
Description: Student may contact the instructor or department for information.

CE 4401 Steel and Reinforced Concrete Design
A-F only, 4 credit(s); prerequisite Grade of at least C- in 3401, Concurrent registration is required (or allowed) in 3402, [upper div CSE or grad student]; Instructor: French, Catherine Ellen
Description: Student may contact the instructor or department for information.

CE 4413 Steel Design II
A-F only, 3 credit(s); prerequisite [Grade of at least C- in 4401, [upper div CSE or grad student]] or instr consent; 4411 recommended; Instructor: Le, Jialiang
Description: Student may contact the instructor or department for information.

CE 4501 Hydrologic Design
A-F only, 4 credit(s); prerequisite 3502; Instructor: Foufoula, Efi
Description: Student may contact the instructor or department for information.

CE 4512 Open Channel Hydraulics
A-F only, 4 credit(s); prerequisite CSE or grad, 3502 or instr consent; Instructor: Guala, Michele
Description: Student may contact the instructor or department for information.

CE 5180 Special Topics
A-F only, 1-4 credit(s), maximum credits 4, 3 completions allowed; prerequisite instr consent; Instructor: Hondzo, Miki
Description: Student may contact the instructor or department for information.

CE 5180 Special Topics
A-F only, 1-4 credit(s), maximum credits 4, 3 completions allowed; prerequisite instr consent; Instructor: Davis, Gary Arnold
Description: Student may contact the instructor or department for information.

CE 5180 Special Topics
A-F only, 1-4 credit(s), maximum credits 4, 3 completions allowed; prerequisite instr consent; Instructor: Sotiropoulos, Fotis
Description: Student may contact the instructor or department for information.

CE 5180 Special Topics
A-F only, 1-4 credit(s), maximum credits 4, 3 completions allowed;
CE 5541 Environmental Water Chemistry
A-F only, 3 credit(s); prereq [Math 2263 or Math 2374 or equiv], [sr or grad student] in civil engineering]] or instr consent;
Instructor: Strack PhD, Otto D
Description: Student may contact the instructor or department for information.

CE 5542 Chemistry of Organic Pollutants in Environmental Systems
A-F only, 4 credit(s); prereq [Math 2263 or Math 2374 or equiv], [sr or grad student] in civil engineering]] or instr consent;
Instructor: Gulliver, John Stephen
Description: Student may contact the instructor or department for information.

CE 5551 Environmental Microbiology
A-F only, 3 credit(s); prereq [Upper div or grad] student;
Instructor: LaPara, Timothy M
Description: Student may contact the instructor or department for information.

CE 8200 Seminar: Transportation
S-N only, 1-3 credit(s), max credits 3, 3 completions allowed;
Instructor: Liu, Henry X.
Description: Student may contact the instructor or department for information.

CE 8211 Theory of Traffic Flow
4 credit(s);
Instructor: Houdros, John
Description: Student may contact the instructor or department for information.

CE 8300 Seminar: Geomechanics
S-N only, 1-3 credit(s), max credits 4, 4 completions allowed;
Credit will not be granted if credit has been received for:
GEOE 8300;
Instructor: Gonella, Stefano
Description: Student may contact the instructor or department for information.

CE 8341 Dynamics of Soils and Foundations
A-F only, 4 credit(s); prereq Basic courses in soil mechanics/dynamics or instr consent;
Instructor: Guzina, Bojan B
Description: Student may contact the instructor or department for information.

CE 8400 Seminar: Structures
S-N only, 1 credit(s), max credits 3, 3 completions allowed;
Instructor: Le, Jialiang
Description: Student may contact the instructor or department for information.

CE 8421 Structural Dynamics
A-F only, 3 credit(s); prereq [3401, AEM 2012] or instr consent; concurrent enrollment 4411 recommended;
Instructor: Wojtkiewicz Jr, Steven F
Description: Student may contact the instructor or department for information.

CE 8431 Structural Stability
A-F only, 3 credit(s); prereq CSE grad student or instr consent;
Instructor: Shield, Carol K
Description: Student may contact the instructor or department for information.

CE 8490 Special Topics
A-F only, 1-4 credit(s), max credits 8; prereq instr consent;
Instructor: Le, Jialiang
Description: Student may contact the instructor or department for information.

CE 8500 Environmental Seminar
S-N only, 1 credit(s), max credits 3, 3 completions allowed;
prereq grad CE major or instr consent;
Instructor: Hozalski PhD, Raymond M
Description: Student may contact the instructor or department for information.

CE 8503 Environmental Mass Transport
A-F only, 4 credit(s); prereq 3502, 3501 or equiv or instr consent;
Instructor: Gulliver, John Stephen
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
A-F only, 3 credit(s); prereq [4541, 5541] or instr consent;
Instructor: Surdo, Erin Mehleis
Description: Student may contact the instructor or department for information.

CE 8551 Environmental Microbiology: Molecular Theory and Methods
A-F only, 4 credit(s); prereq 5551 or instr consent;
Instructor: LaPara, Timothy M
Description: Student may contact the instructor or department for information.

CE 8601 Introduction to Stream Restoration
A-F only, 3 credit(s);
Instructor: Paola, Chris
Description: Student may contact the instructor or department for information.

Classical Civilization
245 Nicholson Hall

CLCV 3993 Directed Studies in Classical Civilization
1-4 credit(s), max credits 4, 1 completion allowed; prereq instr consent;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

CLCV 3994 Directed Research in Classical Civilization
1-4 credit(s), max credits 4, 1 completion allowed; prereq instr consent;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

Classical and Near Eastern Studies
245 Nicholson Hall

CNES 1002 World of Greece
3 credit(s); prereq credit will not be granted if credit received for: CLASS 1008; Meets CLE req of Historical Perspectives;
Instructor: STAFF
Description: This course will introduce students to the culture, art, history, literature, and philosophy of ancient Greece from Mycenaean times to the Hellenistic Age. What influences were there on Greek culture? How did Greek culture develop and change over time? What values were important to the Greeks? In various realms (art, architecture, literature, history, philosophy, poetry) the Greeks inspired and might even be said to have created Western civilization, to such an extent that their influence continues today. Attention will also be devoted to questions of how Greek innovation became so widespread, and how their influence continues today. Grading: 30% mid exam, 40% final exam. 2 midterms, 1 final exam. Exam Format: short-answer essays (all), long essay (final only), true/false, multiple choice, map and date identifications. Exams are not cumulative except for the long essay on the final.

CNES 1042 Greek and Roman Mythology
4 credit(s); Credit will not be granted if credit has been received for: CNES 1042H; Meets CLE req of Arts/Humanities;
Instructor: Woods, Heather A
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policies, including fee and financial aid restrictions. In this course you will become familiar with the characters, stories and themes that compose Greek and Roman mythology, and will learn a bit about how they relate to the societies that created and perpetuated them. The readings are selected from a variety of primary texts, including Homer’s Odyssey, Ovid’s Metamorphoses, the plays of Greek tragedians, and Mesopotamian epic as well as a central Classical Mythology textbook. Assignments range from short auto-graded quizzes (4) to critical essays (2), image identification exercises (2) and assignments that offer more scope for creativity (2). This course is self-paced with an extended 9-month term, but can be completed in less time if the student chooses to work steadily and consistently. There are two paper-based, proctored exams in this course, (scheduled by the student and taken at a testing facility in person) but all other course components are online. Upon successful completion of this course you will: --be familiar with a wide corpus of Classical myths and will be able to offer insight into their interpretation --be able to identify mythological characters and situations in visual media (paintings, sculpture, mosaics, etc.) and interpret their significance in context --have a broad base of terms and vocabulary to use in discussing Classical mythology critically --have a greater understanding of the role of myth and story in helping a society make sense of the world and gain greater insight into the differences between and similarities among ancient cultures and our own.
Style: Online with handwritten exams. Course takes a “minimum” of 4 months to complete.
Grading: 15% mid exam, 20% final exam, 20% reports/papers, 15% special projects, 30% quizzes.
Exam Format: Supervised, in-person (not online) exams.

CNES 1046 Technical Terminology for the Health Professions
3 credit(s); prereq credit will not be granted if credit received for: CLAS 1148;
Instructor: Willey, Andrew James
Description: This is a fully online section offered online through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policies, including fee and financial aid restrictions. Although only used in a specialized, technical environment, medical terminology is nevertheless a vocabulary in its own right, with its own history and rules of morphology (word-formation). This course emphasizes linguistics and etymology. Rather than attempt to impart all the specialized vocabulary necessary for the study of, e.g. anatomy or physiology, you will learn how medical terms are constructed from Greek and Latin prefixes, roots, and suffixes. You will also learn by heart most of the commonly found roots of medical terms. Armed with this knowledge, you will have the skills and knowledge to “decode” or “translate” unfamiliar terms as you come upon them. In addition, you will also possess a solid base of vocabulary to build upon--whatever your future involvement in the health professions may be, as a doctor, nurse, occupational therapist, or simply as an occasional patient.
Style: Online with handwritten exam
Grading: 40% final exam, 60% quizzes.
Exam Format: Supervised, in-person (not online) exam.

CNES 1201 The Bible: Context and Interpretation
3 credit(s); Credit will not be granted if credit has been received for: RELS 3201; Meets CLE req of Literature;
Instructor: STAFF
Description: Where did the Hebrew Bible (Old Testament?) come from? In what way do the worldviews and traditions expressed by its ancient authors compare with those of the superpowers of their day, including the Canaanites (from Ugarit), the Hittites, the Egyptians, and the Mesopotamians? How did the text of the Hebrew Bible come to represent a millennium of beliefs, desires, and customs from ancient Israel and Judah, many of which still reverberate in our society today? Integrating a cross-disciplinary spectrum of religion, history, and literature, students in this class will read, analyze, and interpret Hebrew Bible texts in English, using methods employed by biblical scholars. This class fulfills the Liberal Education Requirement of Literature because it students read the Hebrew Bible as ancient literature, asking questions about language and meaning, literary effects, and the Hebrew Bible’s social and historical context.
Style: Online with handwritten exams
Grading: 40% final exam, 60% quizzes.
Exam Format: Supervised, in-person (not online) exam.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
historical contexts. Since we will engage in secular study only, analytically examining all relevant religious texts and traditions, students are required to have an open mind and willingness to read and discuss the Bible in a new way.

**CNES 3156 Greek and Roman Art and Archaeology**  
3 credit(s); Meets CLE req of Arts/Humanities;  
**Instructor:** Canepa PhD,Matthew P.  
**Description:** Student may contact the instructor or department for information.

**CNES 3201 The Bible: Context and Interpretation**  
3 credit(s); prerequisite Knowledge of Hebrew not required; Credit will not be granted if credit has been received for: RELS 3201; Meets CLE req of Literature;  
**Instructor:** STAFF  
**Description:** The course attempts to “get behind” the overlay imposed by modern culture upon the Old Testament/Hebrew Bible and to read it on its own terms. In order to do so, students will explore the fascinating literature and religion of the ancient Near East. We will read texts from ancient Mesopotamia, Canaan (Ugarit), and Israel, and discuss both the ideas found in them and their literary artistry. After investigating the literature of Israel’s neighbors, we will read biblical literature in dialogue with these stories, intellectually analyzing the narratives of the of creation of the world, the origin of life, the great flood story, the idea of divine revelation, and the significance of law. Specific topics to be dealt with include: God, creation, fate, the point of human life, and the meaning of history. The course teaches students how to read closely and to think critically about the meaning of a text. Students will be asked to read primary sources for specific questions of content and meaning, frequently with the help of assignment sheets, and to learn a methodology for deciding between right and wrong answers. The skills thereby learned will assist students with any other course in the Liberal Arts. The assumptions of the course are academic and secular, as required by the First Amendment. All texts and all religious traditions will be examined analytically.

**CNES 3535 Death and the Afterlife in the Ancient World**  
3 credit(s); Credit will not be granted if credit has been received for: RELS 3535; Meets CLE req of Arts/Humanities;  
**Instructor:** Sellew,Philip  
**Description:** In this class we study attitudes, beliefs, and behaviors related to death and the afterlife found in the cultures of the ancient Mediterranean and Near East. Sources include literature, funerary art and epitaphs, as well as archaeological evidence for burial practices and care of the dead. The main objective of the course is to have us confront and explore a diverse set of responses to death and beliefs about the afterlife as found in ancient societies that may be more or less familiar to us. Art, literature, and mortuary practices alike help class participants (both the students and the professor) to confront and query our own expectations and attitudes. This approach enables us to consider our own experiences and expectations of death through a critical, analytical framework of historical and cultural comparison and not merely as personal response. The themes of mortality and care of the dead carry through all the topics, which are arranged more or less chronologically and geographically to consider Egypt, Mesopotamia, Canaan/Israel, Greece, Rome, early Judaism, and ancient Christianity. The final discussion paper may treat beliefs and practices surrounding death and/or the afterlife in a contemporary context that the student would like to analyze from the perspective of the course.  
**Style:** 70% Lecture, 30% Discussion.  
**Grading:** 25% mid exam, 65% reports/papers, 10% class participation  
**Exam Format:** midterm - short essays

**CNES 3950 Aspects of Ancient Culture**  
3 credit(s), max credits 9, 3 completions allowed;  
**Instructor:** Gallia,Andrew B  
**Description:** Student may contact the instructor or department for information.

**CNES 3951W Major Project**  
4 credit(s); prerequisite Three 3xxx ANE courses, [major in ANE or CNEA or RelS], instr consent; Meets CLE req of Writing Intensive;  
**Instructor:** STAFF  
**Description:** Student may contact the instructor or department for information.

**CNES 5013 Introduction to Roman Law**  
3 credit(s);  
**Instructor:** Sheets,George A  
**Description:** This course is intended to serve as a general introduction to Roman private law. The initial part of the semester will be spent introducing: (1) the sources of Roman private law, (2) private law procedure, with a focus on the formulary system of civil procedure, and (3) an overview of substantive law doctrines, and (4) the influence of Roman law on European legal traditions. We will then turn to more detailed consideration of one substantive area of Roman private law: property law. This topic will be explored by means of the “case-book” method: in-class discussion of issues arising from actual and hypothetical Roman fact situations taken from the Roman juristic literature. We will also read a trial speech by Cicero, in a lawsuit dealing with property law issues. Roman property law largely informs all the modern European civil law systems, and has also provided the source for a number of common law doctrines.  
**Style:** 35% Lecture, 65% Discussion.  
**Grading:** 30% final exam, 20% class participation  
**Exam Format:** short answer and essay

**CNES 5051 Before Herodotus: History and Historiography of Mesopotamia and the Ancient Near East**  
A-F only, 3 credit(s); prerequisite Previous coursework in Ancient Near Eastern history recommended; Credit will not be granted if credit has been received for: HIST 5051;  
**Instructor:** von Dassow,Eva  
**Description:** Student may contact the instructor or department for information.

**CNES 5192 Persia and the Ancient Iranian World: Art and Archaeology of Achaemenid Persia and Sasanian Persia**  
3 credit(s);  
**Instructor:** Canepa PhD,Matthew P.  
**Description:** Student may contact the instructor or department for information.

**CNES 5535 Death and the Afterlife in the Ancient World**  
3 credit(s); Credit will not be granted if credit has been received for: RELS 3535;  
**Instructor:** Sellew,Philip  
**Description:** In this class we study attitudes, beliefs, and behaviors related to death and the afterlife found in the cultures of the ancient Mediterranean and Near East. Sources include literature, funerary art and epitaphs, as well as archaeological evidence for burial practices and care of the dead. The main objective of the course is to have us confront and explore a diverse set of responses to death and beliefs about the afterlife as found in ancient societies that may be more or less familiar to us. Art, literature, and mortuary practices alike help class participants (both the students and the professor) to confront and query our own expectations and attitudes. This approach enables us to consider our own experiences and expectations of death through a critical, analytical framework of historical and cultural comparison and not merely as personal response. The themes of mortality and care of the dead carry through all the topics, which are arranged more or less chronologically and geographically to consider Egypt, Mesopotamia, Canaan/Israel, Greece, Rome, early Judaism, and ancient Christianity. The final discussion paper may treat beliefs and practices surrounding death and/or the afterlife in a contemporary context that the student would like to analyze from the perspective of the course.  
**Style:** 70% Lecture, 30% Discussion.  
**Grading:** 25% mid exam, 65% reports/papers, 10% class participation  
**Exam Format:** midterm - short essays

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CNES 5794 Introduction to Classical and Near Eastern Studies
102
S-N only, 1 credit(s); prereq grad major or minor or instr consent;
Instructor: Krevans,Nita
Description: Student may contact the instructor or department for information.

CNES 5796 Classical Texts: Approaches and Methods
3 credit(s); prereq CNES grad student or instr consent;
Instructor: Nappa,Christopher
Description: This course will survey an array of approaches taken toward Greek and Latin literary texts. We will begin by looking briefly at typical ancient and late antique approaches to literature. We will also spend some time on the study of classical texts in the Middle Ages and Renaissance, before moving on to the variety of ways classical texts have been studied in and since the 19th century. Readings will be drawn from works on the history of classical scholarship, twentieth-century critical theory, and most importantly studies of classical texts themselves. The goal of this course is to introduce students to the variety of ways in which classical texts are read by professional scholars and to help students think carefully about the underlying assumptions that they bring to their own readings of classical texts.
Style: 30% Lecture, 45% Discussion, 25% Student Presentation.

CNES 5996 Directed Instruction
1-12 credit(s), max credits 12, 1 completion allowed; prereq instr consent, dept consent, college consent;
Instructor: Jassen,Alex P
Description: Student may contact the instructor or department for information.

Clinical Laboratory Science
D-242 Mayo (Box 609 UMHC)

CLSP 5090 Special Laboratory Methods
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prereq instr consent;
Instructor: Wells,Carol Lee
Description: Student may contact the instructor or department for information.

CLSP 5120 Seminar: Clinical Laboratory Science
S-N only, 1 credit(s), max credits 3, 3 completions allowed; prereq instr consent;
Instructor: Panoskaltsis-Mortari PhD,Angela
Description: Student may contact the instructor or department for information.

CLSP 5121 Journal Presentations
S-N only, 1 credit(s), max credits 2; prereq 1st yr CLS grad student;
Instructor: Panoskaltsis-Mortari PhD,Angela
Description: Student may contact the instructor or department for information.

CLSP 5402 Molecular Diagnostics
A-F only, 1 credit(s); prereq instr consent;
Instructor: Wiesner,Stephen Michael
Description: Student may contact the instructor or department for information.

CLSP 5768 Advanced Hematology
A-F only, 5-10 credit(s), max credits 30, 6 completions allowed; prereq instr consent;
Instructor: Larsen,Karen B
Description: Student may contact the instructor or department for information.

CLSP 8193 Advanced Topics in Clinical Chemistry
2 credit(s); prereq instr consent;
Instructor: Tsai,Michael Y
Description: Student may contact the instructor or department for information.

CLSP 8194 Research on Clinical Laboratory Problems
1-3 credit(s), max credits 3, 1 completion allowed; prereq instr consent;
Instructor: Panoskaltsis-Mortari PhD,Angela
Description: Student may contact the instructor or department for information.

Clinical Laboratory Sciences Program
15-170 Phillips Wangensteen Bldg (MMC 711)

CLSP 1010 Orientation in Clinical Laboratory Sciences
S-N only, 1 credit(s); prereq dept consent;
Instructor: Spannaus-Martin,Donna J
Description: Student may contact the instructor or department for information.

CLSP 4092 Honors Program: Laboratory Methods
3 credit(s); prereq instr consent;
Instructor: Spannaus-Martin,Donna J
Description: Student may contact the instructor or department for information.

CLSP 4102 Principles of Diagnostic Microbiology
A-F only, 2 credit(s); prereq One microbiology course with lab, one biochem course, enrolled CLSP student, instr consent;
Instructor: Conway-Klaassen,Janice M.
Description: Student may contact the instructor or department for information.

CLSP 4102 Principles of Diagnostic Microbiology
A-F only, 2 credit(s); prereq One microbiology course with lab, one biochem course, enrolled CLSP student, instr consent;
Instructor: Conway-Klaassen,Janice M.
Description: Student may contact the instructor or department for information.

CLSP 4103 Diagnostic Microbiology: Laboratory
A-F only, 2 credit(s); prereq One microbiology course with lab, one biochem course, enrolled CLSP student, instr consent;
Instructor: Conway-Klaassen,Janice M.
Description: Student may contact the instructor or department for information.

CLSP 4201 Hematology I
A-F only, 3 credit(s); prereq Enrolled CLSP, instr consent;
Instructor: Swinnett,Cheryl D
Description: This course will include the theory and application of the basic principles and techniques in clinical hematology and hemostasis. There will be both lecture and laboratory sessions. Students who have been admitted to the professional program in medical technology are eligible for this course.
Style: 33% Lecture, 67% Laboratory.
Exam Format: Multiple choice

CLSP 4302 Clinical Chemistry I: Lecture and Lab
A-F only, 3 credit(s); prereq Two organic chem courses with lab, one biochem course, instr consent;
Instructor: Brunzel,Nancy A
Description: Student may contact the instructor or department for information.

CLSP 4401 Immunology
A-F only, 1 credit(s), max credits 2; prereq BIOC 3021, instr consent;

Clinical Physiology and Movement Science

CPMS 5101 Introduction to Clinical Physiology and Movement Science
A-F only, 3 credit(s), max credits 6;
Instructor: Konczak PhD,Duergen
Description: Student may contact the instructor or department for information.

Cognitive Science
205 Elliott Hall

CGSC 8410 Perspectives in Learning, Perception, and Cognition
S-N only, 2 credit(s), max credits 24, 12 completions allowed;
Instructor: Gershenson,Celia Wolk
Description: Course Objectives/Goals: The objectives of the course are to provide exposure to current knowledge in the many-faceted field of cognitive sciences. The weekly presentations are designed to encompass the wide range of research areas that comprise the cognitive sciences. Class Structure: The course is in the form of a colloquium series. Each session consists of a 40-50 minute presentation followed by a question and discussion period. Course Requirements: Enrolled students are required to attend all colloquia, read references provided, (the references of which available online at http://www.cogsci.umn.edu/calendar/colloquia.htm), and actively participate in discussion sessions. Students will submit a five to six page paper at the end of the semester in lieu of a final examination.

College of Food, Agri & Natural Resource Sciences

CFAN 1101 Dean's Engaged Leaders Seminar
A-F only, 1.5-3 credit(s), max credits 3, 1 completion allowed; prereq Incoming 1st-yr CFANS students only;
Instructor: Lorenz,Karl W
Description: Student may contact the instructor or department for information.

CFAN 1201 Discovering Majors and Careers
A-F only, 1 credit(s);
Instructor: Hruska,Elizabeth Suzanne
Description: Are you anxious or stressed about making career decisions or settling in on an appropriate major? Would you like to investigate career and major options in more detail and how they relate to your personality, strengths, values and skills? Discovering Majors and Careers is a course that can help you learn more about your skills, values, interests, strengths and personality. Then learn about how you can use your major to find a career you'll enjoy. We'll also introduce you to many of the resources available on campus, and help you explore the ways internships, community service, work experience, and travel can impact your future success. The goal of the class is to help you be proactive about the future and learn strategies that will help with a lifetime of decision making.
Style: 30% Lecture, 30% Discussion. 30% Small Group Activities, 5% Student Presentation, 5% Guest Speakers.

CFAN 1902 Topics: Freshman Seminar: Ways of Knowing and Science
3 credit(s); prereq freshman; Meets CLE req of Diversity and Soc Justice US;
Instructor: Lorenz,Karl W
Description: Every human society has developed its own knowledge of food and health relationships. But until very recently, scientific researchers at large Universities have paid little attention to this knowledge, in part because it has been dismissed as “unscientific”. Most professional scientists do not accept indigenous, ancestral or ancient knowledge systems as
valid. When such knowledge is considered, it is studied through the lens of "science" to determine its legitimacy. Diverse food practices and understandings may be acknowledged as cultural artifacts, but are seldom seen by scientists as legitimate on their own merit. In this seminar, we will attempt to take a more culturally competent "inside look" at diverse ways of knowing. Experience is often the best teacher. By direct experience and involvement with another culture, we come to recognize their cultural worldview and its way of seeing and making sense of the world. In this way, you will encounter different ways of knowing. We will focus specifically on different cultural orientations to understanding food and health relationships. We will explore Indigenous knowledges, Ayurveda, Chinese Medicine, western/biomedical and African American perspectives. Each of these "ways of knowing" is grounded in distinct and divergent ancestral and cultural orientations. We will experience and explore these systems through field trips and invited speakers. Accordingly, class time will be re-formed into field trips and on-site learning experiences. All students are expected to attend these field trips or to make other arrangements mutually agreeable with the faculty. Field trip learning experiences will form the basis for assignments. Over the semester, you will be asked to complete: two writing assignments where you will write on a health-related issue of your choice, but from within the perspective being studied; one report based on an individual "practicum" experience (clinic visit, concert, etc) in one of the orientations being explored; one group presentation of 15-20 minutes involving 3-4 students addressing an issue identified by a community as important. This issue will be identified within the first few weeks of class, and groups will work on research/preparation of the presentation so that they can present later in the semester.

CFAN 1942 Topics: Freshman Seminar
A-F only, 3 credit(s); prereq Fr; Meets CLE req of Technology and Society
Instructor: Levine, Allen Stuart
Description: Student may contact the instructor or department for information.

CFAN 3000 Directed Studies in International Agriculture
A-F only, 2-4 credit(s), max credits 8, 3 completions allowed; prereq instr consent; Instructor: STAFF
Description: Student may contact the instructor or department for information.

CFAN 3201 Career and Internship Preparation
A-F only, 1 credit(s); prereq Soph or jr or sr or grad student credit will not be granted if credit received for: 3201;
Instructor: Newberg, Sarah Nagel
Description: Want to be sure your ready to put your best foot forward when searching for jobs and internships? This 1 credit course is ideal for students in any major seeking internships and/or full time work. This course covers topics that will prepare you for your job/internship search including communicating your skills, resume writing, interviewing, job search and salary negotiation.
Style: 50% Lecture, 10% Discussion, 30% Small Group Activities, 10% Guest Speakers.
Grading: 25% reports/papers, 50% special projects, 10% class participation, 10% other evaluation.

CFAN 3201 Career and Internship Preparation
A-F only, 1 credit(s); prereq Soph or jr or sr or grad student credit will not be granted if credit received for: 3201;
Instructor: Okstad, Brian Clay
Description: Student may contact the instructor or department for information.

CFAN 3201 Career and Internship Preparation
A-F only, 1 credit(s); prereq Soph or jr or sr or grad student credit will not be granted if credit received for: 3201;
Instructor: Hanson, Matthew R
Description: Want to get ahead of the competition when searching for jobs and internships? This 1 credit course is ideal for undergraduate and graduate students in any major seeking internships and/or full time work. This course covers topics that will prepare you for your job/internship search including skills assessment, resume writing, interviewing, job searching and salary negotiation.
Grading: 25% reports/papers, 50% special projects, 10% class participation, 15% other evaluation.

CFAN 3201 Career and Internship Preparation
A-F only, 1 credit(s); prereq Soph or jr or sr or grad student credit will not be granted if credit received for: 3201;
Instructor: Fredrickson, Heather Nagle
Description: Student may contact the instructor or department for information.

CFAN 3480 Topics in CFANS
1-4 credit(s), max credits 8;
Instructor: Brakke, Mary Patricia
Description: Student may contact the instructor or department for information.

CFAN 3480 Topics in CFANS: Grad & Prof School: Success Strategies Prep
1-4 credit(s), max credits 8;
Instructor: Sage PhD, Starr Kelly
Description: Student may contact the instructor or department for information.

CLA 1001 Introduction to CLA Student Life
S-N only, 1 credit(s);
Instructor: STAFF
Description: CLA 1001 teaches strategies to aid first-year students in their transition to the College of Liberal Arts and the University of Minnesota. The course is designed to be a continuing orientation during the first semester at the U of M. CLA 1001 covers topics including study skills, the liberal arts, and four-year planning. The course also addresses student life issues such as finances and campus involvement while introducing students to the University of Minnesota Portfolio. Each section of the course is taught by an academic advisor from CLA Student Services, bringing together both the classroom experience and advising. The sections are co-led by an undergraduate teaching assistant, who will assist students with their transition to college from a peer perspective.
Style: 40% Lecture, 40% Discussion.
Grading: Based on attendance, participation, and satisfactory completion of all work.
Exam Format: No exams

CLA 1005 Introduction to Liberal Arts Learning
A-F only, 3 credit(s); prereq CLA ATS Fr;
Instructor: Williams, Andrew L
Description: Student may contact the instructor or department for information.

CLA 1301 SEAM First Year Seminar
A-F only, 2 credit(s); prereq SEAM;
The topics are discussed on a scientific basis, but how human values and policies affect our decisions (and tradeoffs) are also considered. The hands-on laboratory component reinforces the lecture and requires hypothesis testing, setting up experiments, making physical, chemical and biological measurements, analyzing and interpreting the data, graphing results, and writing laboratory reports. Major environmental issues and the underlying scientific principles, the relationship (and impact) of humans with the environment, technologies that cause and solve environmental issues, reliable information sources, are discussed. Throughout the class, the role that societal values and ethics play in selecting and implementing solutions to environmental problems are interwoven into the material. Thus, an emphasis is how sustainable solutions to our environmental problems must not only be based on sound science, but also be consistent with our values and ethics. These topics are used to satisfy the Environmental Theme. Part of being a citizen of world is understanding how human activities (ranging from daily individual to societal choices) impact the environment and the species (including humans) that depend on environmental resources for survival. Minimizing our impacts also requires an understanding of the drivers of environmental processes. Liberal educations requirements such as IOT 1101 are designed to provide such knowledge to make students engaged public citizens.

**Style:** 40% Lecture, 40% Laboratory, 5% Field Trips, 5% Guest Speakers.

**Grading:** 50% reports/papers, 40% quizzes, 10% in-class presentation. Reports are laboratory reports.

### CSE 1311 Engineering Basics

**A-F only, 2 credit(s);**

**Instructor:** Imberson, Paul Jay

**Description:** This course is for students who are undecided on their major/career direction. COURSE OBJECTIVES -Examine current major/career direction -Assess interests, values, skills, strengths, and personality preferences to determine careers/work environments in which they may fit -Investigate careers of interest through primary and secondary resources -Become knowledgeable about fields within engineering, science, or other industries through informational interviewing and industry guest speakers -Understand how your skill set may transfer to other occupations -Learn techniques for gaining experience in your chosen field -Create goals related to your career aspirations ASSESSMENT FEES This course uses five self-assessments to assist you in clarifying your personality, interests, values, skills, strengths: -Personality: Myers-Briggs Type Indicator-MBTI ($10) -Interests: Strong Interest Inventory ($10) -StrengthsQuest ($10) -Values: Values Assessment (Free) -Transferable Skills Inventory (Free)

### CSE 1411 Exploring Careers in Science and Engineering

**A-F only, 1 credit(s), max credits 2;**

**Instructor:** Hinz, Katy Irene

**Description:** This course is for students who are undecided on their major/career direction. COURSE OBJECTIVES -Examine current major/career direction -Assess interests, values, skills, strengths, and personality preferences to determine careers/work environments in which they may fit -Investigate careers of interest through primary and secondary resources -Become knowledgeable about fields within engineering, science, or other industries through informational interviewing and industry guest speakers -Understand how your skill set may transfer to other occupations -Learn techniques for gaining experience in your chosen field -Create goals related to your career aspirations ASSESSMENT FEES This course uses five self-assessments to assist you in clarifying your personality, interests, values, skills, strengths: -Personality: Myers-Briggs Type Indicator-MBTI ($10) -Interests: Strong Interest Inventory ($10) -StrengthsQuest ($10) -Values: Values Assessment (Free) -Transferable Skills Inventory (Free)
COMM 1910W Freshman Seminar
A-F only, 3 credit(s), max credits 6; Meets CLE req of Writing Intensive;
   Instructor: Sheldon PhD, Amy
   Description: Student may contact the instructor or department for information.

COMM 1910W Freshman Seminar
A-F only, 3 credit(s), max credits 6; Meets CLE req of Writing Intensive;
   Instructor: Schiapappa, Edward
   Description: The purpose of this seminar is to introduce students to the theory and practice of the critical analysis of popular culture. It presupposes that we ought to treat popular culture seriously because popular-culture texts, artifacts, and practices are important cultural expressions that have an impact on the way people make sense of themselves, others, and the world. In short, popular culture persuades or socializes us to think and behave in some ways rather than others, and as citizens and consumers it is to our benefit to understand how that persuasion occurs.

COMM 3110 Topics in Speech-Communication
3 credit(s), max credits 15, 5 completions allowed;
   Instructor: Helwich, David A
   Description: Student may contact the instructor or department for information.

COMM 3190H Honors Course: Research Seminar in Communication
A-F only, 3 credit(s), max credits 6; prereq Honors candidate in comm, instr consent, dept consent
   Instructor: STAFF
   Description: Student may contact the instructor or department for information.

COMM 3211 Introduction to U.S. Electronic Media
3 credit(s);
   Instructor: Gregg, Peter Benjamin
   Description: Student may contact the instructor or department for information.

COMM 3231 Reality TV: History, Culture, and Economics
3 credit(s);
   Instructor: Ouellette, Laurie Jean
   Description: Student may contact the instructor or department for information.

COMM 3401 Introduction to Communication Theory
3 credit(s);
   Instructor: Hewes, Dean E
   Description: COMM 3401 is an introduction to the scientific study of communication. Topics covered include the goals and structure of social scientific theory and various approaches to communication theory including the behavioral, cognitive, evolutionary, cybernetic and socio-cultural. Examples of each approach are discussed drawn from interpersonal, mass, and intercultural communication. This is usually a large class necessitating lectures and discussion. Group projects, midterm and final exams form the basis of the final grades.
   Style: 80% Lecture, 20% Discussion.

COMM 3402 Introduction to Interpersonal Communication
3 credit(s);
   Instructor: STAFF
   Description: Student may contact the instructor or department for information.

COMM 3431 Persuasion Theories
3 credit(s); prereq Soph recommended;
   Instructor: STAFF
   Description: This course is designed to familiarize you with the complex and dynamic phenomenon of persuasion as a form of human communication. There are three basic objectives for the course: 1) To be able to understand the concept of persuasion from a theoretical perspective, and be familiar with the research findings on the persuasion process. 2) To demonstrate understanding of the process of persuasion in a variety of communication contexts, through oral and written exercises. 3) To be a critical consumer of persuasive messages.
   Style: 80% Lecture, 20% Discussion.
   Grading: 12% mid exam, 12% final exam, 25% reports/papers, 12% special projects, 25% quizzes, 12% class participation.
   Exam Format: Mixture of multiple choice and short answer/definition questions

COMM 3452W Communication and the Intercultural Reentry
3 credit(s);
   Instructor: Meets CLE req of Writing Intensive;
   Description: Student may contact the instructor or department for information.

COMM 3601 Introduction to Rhetorical Theory
3 credit(s);
   Instructor: Greene, Ronald Walter
   Description: This course introduces students to rhetorical theory by accounting for the different forms of political, cultural, and economic persuasion that permeate everyday life. To orient ourselves to these forms of persuasion, the class highlights the philosophical disagreements about the value of rhetoric to education, democracy, and morality. To explore the contemporary relevance of these philosophical disagreements to our experience of persuasion, the class will investigate Presidential speechmaking, advertising, movies, and video games.
   Style: 70% Lecture, 10% Film/Video, 10% Discussion.
   Grading: 4 tests each one builds on the other. Roughly 70%. Participation assignments (quizzes, homework, in class participation) 30%.
   Exam Format: Multiple choice; True-False

COMM 3615 Argumentation
3 credit(s); prereq Soph;
   Instructor: STAFF
   Description: Student may contact the instructor or department for information.

COMM 3625 Communication Ethics
A-F only, 3 credit(s);
   Instructor: STAFF
   Description: Student may contact the instructor or department for information.

COMM 3631 Freedom of Speech
3 credit(s); Meets CLE req of Civic Life and Ethics;
   Instructor: STAFF
   Description: Student may contact the instructor or department for information.

COMM 3676W Communicating Terrorism
3 credit(s); Meets CLE req of Global Perspectives; meets CLE req of Writing Intensive;
   Instructor: Gross, Alan G
   Description: Terrorism is an international problem. With the end of the Cold War, it is one of the few sources of our awareness that we live in an international world, vulnerable to some extent to the pressures of that world. Different cultures have created different historical trajectories for terrorism; to illustrate this, the course contrasts Algerian, Irish, and Arab terrorism. From these examples, we can see that terrorism is about the thinking of political destiny in terms of violence, about legitimizing violence as an instrument of politics by those who feel they have been deprived of justice by the violence of the state. Four books will...
be read: Frantz Fanon’s, The Wretched of the Earth, a philosophical and psychological rationale against colonialism and neo-colonialism, Walter Lazqueur’s anthology, Voices of Terror, Fouad Ajami’s The Arab Predicament and Eamon Collins’s Killing Rage, an autobiographical account of a former terrorist. We will also view the films, The Battle of Algiers, and Mikhail: Into the Mind of a Terrorist, an interview with a Hamas terrorist, made for Israel television. One Day in September, about terrorism at the Munich Olympics, and End Game in Ireland, a documentary of the Irish peace process. In all these cases, we will examine the arguments for terrorism. We will also look at a case in which the problem of terrorism is seemingly intractable-the Middle East. We will see why it is so. Then we will look at a case in which the problem of terrorism has been solved-Ireland. We will see why it is so. Finally, we will look at terrorism in the Americas and around the world. Students will have an opportunity to grapple with these issues in discussion and to reflect on their implications. Reflection will also be promoted because this course is Writing Intensive. Four short essays will give the students an opportunity to reflect on issues brought up by each of the books that are read.

**Style:** 40% Lecture, 20% Film/Video, 40% Discussion.

**Grading:** 100% reports/papers.

### COMM 3980 Directed Instruction

- **S-N only, 3 credit(s), max credits 6; prereq instr consent, dept consent;**
  - **Instructor:** Dehler, Beatrice E
  - **Description:** Student may contact the instructor or department for information.

### COMM 3990 Research Practicum

- **1-3 credit(s), max credits 6, 6 completions allowed;**
  - **Instructor:** Jones, Susanne Margarethe
  - **Description:** Student may contact the instructor or department for information.

### COMM 4291 New Telecommunication Media

- **A-F only, 3 credit(s); prereq 3211 or instr consent;**
  - **Instructor:** Rodman, Gilbert B.
  - **Description:** Student may contact the instructor or department for information.

### COMM 4407 Communication and Conflict

- **A-F only, 3 credit(s); prereq 3401 or instr consent;**
  - **Instructor:** Jones, Susanne Margarethe
  - **Description:** This course will introduce you to the basic principles of conflict, and the application of effective, appropriate conflict resolution strategies and mediation behaviors. We will discuss factors that lead to conflict, and will introduce the enactment of effective conflict behavior in various social settings and among various cultural groups. While a theoretical discussion of conflict is in the foreground of the class, we will also focus on discussing, learning, and practicing skills to manage conflict constructively.
  - **Style:** 75% Lecture, 25% Discussion.
  - **Grading:** 12% mid exam, 16% final exam, 50% reports/papers, 10% quizzes. 12% for 1st exam
  - **Exam Format:** Multiple choice

### COMM 4471 Communication in Marriage and Family

- **3 credit(s); prereq 3401 or 3402 or instr consent;**
  - **Instructor:** Koerner, Ascan Felix
  - **Description:** Student may contact the instructor or department for information.

### COMM 5211 Critical Media Studies: Theory and Methods

- **A-F only, 3 credit(s); prereq Grad student or instr consent;**
  - **Instructor:** Rodman, Gilbert B.
  - **Description:** N.B. for undergraduates: This course is a graduate-level introduction to Critical Media Studies. There will be 200+ pages of reading each week, as well as 25-30 pages of formal writing. There will NOT be a Senior Paper option built into this course.

### COMM 5402 Advanced Interpersonal Communication

- **3 credit(s); prereq 3401 or 3402;**
  - **Instructor:** STAFF
  - **Description:** Student may contact the instructor or department for information.

### COMM 5411 Small Group Communication Research

- **A-F only, 3 credit(s); prereq 3411 or instr consent;**
  - **Instructor:** Hewes, Dean E
  - **Description:** Student may contact the instructor or department for information.

### COMM 5421 Quantitative Methods in Communication Research

- **A-F only, 3 credit(s); prereq 3401 or instr consent;**
  - **Instructor:** Koerner, Ascan Felix
  - **Description:** Student may contact the instructor or department for information.

### COMM 5441 Communication in Human Organizations

- **3 credit(s); prereq 9 or social science, 3441 or instr consent;**
  - **Instructor:** STAFF
  - **Description:** Student may contact the instructor or department for information.

### COMM 8451 Seminar: Intercultural and Diversity Research

- **3 credit(s); prereq 9 or social science, 3441 or instr consent;**
  - **Instructor:** Jacobi, Laura Jean
  - **Description:** This fully online section is offered through Online and Distance Learning (ODL), College of the Continuing Education. It may be taken for either undergraduate or graduate credit. (Graduate students are advised to register for A-F grading.) Visit “Class URL” for ODL policies, including fee and financial aid information. This course helps students understand the distinct nature of human communication in organizations. Students will learn to recognize the key factors that influence individuals and apply theories of organizational communication. After identifying and using established methods to diagnose issues and problems related to communication, students will develop their own strategies for discovering and explaining organizational and individual interactions.
  - **Style:** 100% Web Based.
  - **Grading:** --12 weekly online discussion submissions and responses (33.3% undergrad, 28.6% grad) --2 brief reviews (33.3% undergrad, 28.6% grad) --1 research project (33.4% undergrad, 28.6% grad) --1 profile of a communications scholar (14.2% grad only)

### COMM 8110 Seminar: Advanced Speech Problems

- **3 credit(s), max credits 15, 6 completions allowed; prereq undergrad degree in spch-comm or equiv;**
  - **Instructor:** Campbell, Karlyn Kohrs
  - **Description:** Student may contact the instructor or department for information.

### COMM 8210 Seminar: Selected Topics in U.S. Electronic Media

- **3 credit(s), max credits 18, 6 completions allowed; prereq 5210 or instr consent; offered when feasible;**
  - **Instructor:** Vavrus, Mary D
  - **Description:** Student may contact the instructor or department for information.

### COMM 8451 Seminar: Intercultural and Diversity Research

- **3 credit(s); prereq instr consent;**
  - **Instructor:** Albert, Rosita D
  - **Description:** Student may contact the instructor or department for information.

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**Comparative Literature**

235 Nicholson Hall

CL 5555 Introduction to Semiotics

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
3 credit(s); Credit will not be granted if credit has been received for: CSDC 5555;  
Instructor: Mowitt,John W  
Description: Student may contact the instructor or department for information.  

CMB 5180 Ecology of Infectious Diseases  
A-F only, 3 credit(s); prereq MVB or CMB or VMed grad student or instr consent; Credit will not be granted if credit has been received for: PUBH 6380;  
Instructor: Singer,Randall  
Description: Student may contact the instructor or department for information.  

CMB 5200 Statistical Genetics and Genomics  
A-F only, 4 credit(s); Credit will not be granted if credit has been received for: ANSC 5200;  
Instructor: Da,Yang  
Description: Student may contact the instructor or department for information.  

CMB 5594 Directed Research in Comparative and Molecular Biosciences  
1-4 credit(s), max credits 8, 8 completions allowed; prereq Jr, instr consent;  
Instructor: STAFF  
Description: Student may contact the instructor or department for information.  

CMB 8134 Ethical Conduct of Animal Research  
A-F only, 3 credit(s); prereq [Grad or professional school] student or instr consent; Credit will not be granted if credit has been received for: ANSC 8134;  
Instructor: Molltor,Thomas William  
Description: Student may contact the instructor or department for information.  

CMB 8202 Mechanisms of Animal Health and Disease II  
3 credit(s); prereq 8201;  
Instructor: Sreevatsan,Srinand  
Description: Student may contact the instructor or department for information.  

CMB 8344 Mechanisms of Hormone Action  
2 credit(s); prereq Course in biochemistry or cell biology or instr consent;  
Instructor: Mauro PhD,Laura J.  
Description: Student may contact the instructor or department for information.  

CMB 8394 Research in Comparative Biomedical Sciences  
1-6 credit(s), max credits 18, 8 completions allowed; prereq Grad CMB major;  
Instructor: Murtaugh,Michael P  
Description: Student may contact the instructor or department for information.  

CMB 8481 Advanced Neuropharmaceuticals  
A-F only, 4 credit(s); prereq instr consent; Credit will not be granted if credit has been received for: NSC 8481;  
Instructor: Fairbanks,Carolyn Ann  
Description: Student may contact the instructor or department for information.  

CMB 8550 Comparative and Molecular Biosciences Seminar  
S-N only, 1 credit(s), max credits 8, 8 completions allowed; prereq Biol sciences grad student;  
Instructor: Rutherford,Mark Stephen  
Description: Student may contact the instructor or department for information.  

CMB 8560 Research and Literature Reports  
S-N only, 1 credit(s), max credits 8, 8 completions allowed;
CSCI 1103 Introduction to Computer Programming in Java
4 credit(s);
Instructor: Dovolis, Chris John
Description: Student may contact the instructor or department for information.

CSCI 1901 Structure of Computer Programming I
4 credit(s); prereq Concurrent registration is required (or allowed) in MATH 1271 or equiv or instr consent;
Instructor: Dovolis, Chris John
Description: CSCI 1901 is the first required course for Computer Science majors. CSCI 1901 is a prerequisite for CSCI 1902 and many other CSci courses. Therefore, students planning to major in computer science and non-majors who plan to take other more advanced computer science courses should take CSCI 1901 first. CSCI 1901 is a challenging course that covers many fundamental programming and software design principles in a practical manner. The following topics are covered: data abstraction, data representations, procedural abstraction, recursion, iteration, lists, tables, intro to object oriented programming and intelligent data. The Scheme programming language is used to implement programs using these concepts. The text for the course is Abelson and Sussman's "Structure and Interpretation of Computer Programs." CSCI 1901 is very time consuming, and the pace is quick. Be sure to allot plenty of time for this course. There is a very large programming component to this course. Students may work in pairs on programming assignments.
Style: 70% Lecture, 30% Discussion.
Grading: 30% mid exam, 30% final exam, 40% other evaluation.
Programming assignments
Exam Format: Programming

CSCI 1901H Honors Structure of Computer Programming
A-F only, 4 credit(s); prereq [MATH 1271 or MATH 1371 or MATH 1571H], honors student;
Instructor: Riedl, John T
Description: Student may contact the instructor or department for information.

CSCI 1902 Structure of Computer Programming II
4 credit(s); prereq 1901 or instr consent;
Instructor: Terveen, Loren Gilbert
Description: Student may contact the instructor or department for information.

CSCI 2011 Discrete Structures of Computer Science
4 credit(s); prereq MATH 1271 or MATH 1371 or instr consent;
Instructor: Sturtivant, Carl
Description: Student may contact the instructor or department for information.

CSCI 2021 Machine Architecture and Organization
4 credit(s); prereq 1902 or instr consent;
Instructor: Zhai, Antonia Bingheng
Description: Student may contact the instructor or department for information.

CSCI 2033 Elementary Computational Linear Algebra
4 credit(s); prereq MATH 1271 or MATH 1371 or instr consent;
Instructor: Boiley, Daniel L
Description: Student may contact the instructor or department for information.

CSCI 3081W Program Design and Development
4 credit(s); prereq [1902, 2021] or instr consent; Meets CLE req of Writing Intensive;
Instructor: Van Wyk, Eric
Description: Student may contact the instructor or department for information.

CSCI 3921W Social, Legal, and Ethical Issues in Computing
3 credit(s); prereq At least soph or instr consent; Meets CLE req of Civic Life and Ethics; meets CLE req of Writing Intensive;
Instructor: Barry, Phillip
Description: Computing technology is having profound effects on society, providing many benefits in communication, commerce, science, and medicine. Our increasing reliance on computers has created many challenges, however. The Internet generates concerns about privacy, freedom of speech, and intellectual property rights. We have also seen how the World Wide Web can make us vulnerable to attacks through worms and viruses. This course will consider these topics within a framework of computer ethics.
Style: 60% Lecture, 20% Discussion. in class exercises
Grading: 15% mid exam, 50% reports/papers, 15% special projects, 5% quizzes, 10% class participation, 5% problem solving.
Exam Format: short answer

CSCI 3970 Industrial Student Co-op Assignment
S-N only, 2 credit(s), max credits 4; prereq CSci, in co-op program, instr consent;
Instructor: Dovolis, Chris John
Description: Student may contact the instructor or department for information.

CSCI 4011 Formal Languages and Automata Theory
4 credit(s); prereq [1902, 2011] or instr consent;
Instructor: Sturtivant, Carl
Description: Finite automata and regular expressions; Context-Free Grammars; Turing machines, computability, recursive versus recursively enumerable sets; Introduction to NP-completeness.
Style: 70% Lecture. recitation
Grading: 15% mid exam, 40% final exam, 45% problem solving.
Exam Format: problem solving

CSCI 4041 Algorithms and Data Structures
4 credit(s); prereq 1902 and 2011 or instr consent; cannot be taken for grad CSci cr;
Instructor: Banerjee, Arindam
Description: Student may contact the instructor or department for information.

CSCI 4061 Introduction to Operating Systems
4 credit(s); prereq 2021 or EE 2361; no cr for grads in CSci;
Instructor: STAFF
Description:

CSCI 4203 Computer Architecture
4 credit(s); prereq 2021 or instr consent credit will not be granted if credit received for: 5201, EE 5361; Credit will not be granted if credit has been received for: EE 4363;
Instructor: Posbergh, Thomas Alfred
Description: Student may contact the instructor or department for information.
CSCI 4203 Computer Architecture
4 credit(s); prerequisite 2021 or instructor consent; credit will not be granted if credit received for: 5201, EE 5361; Credit will not be granted if credit has been received for: EE 4363;
Instructor: Kinney, Larry L
Description: Student may contact the instructor or department for information.

CSCI 4211 Introduction to Computer Networks
3 credit(s); prerequisite 4061 or instructor consent; basic knowledge of computer architecture, operating systems recommended, cannot be taken for grad CSci cr; Credit will not be granted if credit has been received for: CSCI 5211;
Instructor: Du, David Hung-Chang
Description: Student may contact the instructor or department for information.

CSCI 4707 Practice of Database Systems
3 credit(s); prerequisite 4041 or instructor consent; Credit will not be granted if credit has been received for: CSCI 5707;
Instructor: Srivastava, Jaideep
Description: Student may contact the instructor or department for information.

CSCI 4950 Senior Software Project
A-F only, 3 credit(s), maximum credits 6; prerequisite Upper div CSci, instructor consent;
Instructor: Riedl, John T
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prerequisite Upper div CSci, 4061, instructor consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Collins, John
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prerequisite Upper div CSci, 4061, instructor consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Dovolis, Chris John
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prerequisite Upper div CSci, 4061, instructor consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Papanikolopoulos, Nikolaos P
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prerequisite Upper div CSci, 4061, instructor consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Kinney, Larry L
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prerequisite Upper div CSci, 4061, instructor consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Riedl, John T
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prerequisite Upper div CSci, 4061, instructor consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Barry, Phillip
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prerequisite Upper div CSci, 4061, instructor consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Janardan, Ravi
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prerequisite Upper div CSci, 4061, instructor consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Janardan, Ravi
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prerequisite Upper div CSci, 4061, instructor consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Saad, Yousef
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prerequisite Upper div CSci, 4061, instructor consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Sturtivant, Carl
Description: Student may contact the instructor or department for information.
CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Kumar, Vipin
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Tripathi, Anand R
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Du, David Hung-Chang
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Heimdahl, Mats
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Shekhar, Shashi
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Gini, Maria L
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Schrater, Paul Robert
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Srivastava, Jaideep
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Interrante, Victoria
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Kuang, Rui
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Weissman, Jon B
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Hsu, Wei Chung
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: He, Tian
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Nadathur, Gopalan
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Meyer, Gary W
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Van Wyk, Eric
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Terveen, Loren Gilbert
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Roumeliotis, Stergios
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Chen, Fei
Description: Student may contact the instructor or department for information.
CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Tripathi, Anand R
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Chandra, Abhishek
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Zhai, Antonius Bingheng
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Mokbel, Mohamed F
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Banerjee, Arindam
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Yew, Pen-Chung
Description: Student may contact the instructor or department for information.

CSCI 4970W Advanced Project Laboratory
3 credit(s), max credits 9, 3 completions allowed; prereq Upper div CSci, 4061, instr consent; cannot be taken for grad cr; Meets CLE req of Writing Intensive;
Instructor: Van Wyk, Eric
Description: This course covers the design and implementation of high-level programming languages. The course has two parts: (1) language design principles, concepts, constructs; (2) language paradigms, including logic, functional, object-oriented and concurrent programming languages and their applications. Note that we will learn different programming languages only to examine their features and relationship to other languages and not to become proficient in any specific language. The details given below are a preliminary estimation and may change as I develop the course. The course will be web enhanced but the URL is not yet available.
Style: 90% Lecture, 10% Discussion.
Grading: 30% mid exam, 35% final exam, 20% special projects, 15% problem solving.
Exam Format: short answer questions and problems

CSCI 5107 Fundamentals of Computer Graphics 1
3 credit(s); prereq [4041 or instr consent ]; fluency in C/C++, mastery of basic concepts in linear algebra; Credit will not be granted if credit has been received for: CSCI 4107;
Instructor: Meyer, Gary W
Description: This course provides an introduction to the theory and practice of computer graphics programming. Topics covered will include: scan conversion; anti-aliasing; geometric transformations and projections; hidden surface removal; hierarchical modeling and animation; parametric curves and surfaces; illumination and shading; texture mapping, and ray tracing. This course targets senior undergraduates who are interested in understanding and implementing fundamental computer graphic techniques.
Style: 90% Lecture, 10% Discussion.
Grading: 15% mid exam, 25% final exam, 10% problem solving, 50% other evaluation. programming assignments
Exam Format: short answer and problem solving

CSCI 5115 User Interface Design, Implementation and Evaluation
3 credit(s); prereq 4041 or instr consent;
Instructor: Konstan, Joseph Andrew
Description: This is a project-focused course that covers the basics of user interface design, evaluation, and implementation. Students work in groups of 4 or 5 on a semester-long project that includes analysis of the problem domain, user skills, and tasks; iterative prototyping of interfaces to solve the user's needs; several types of interface evaluation including user testing and walkthroughs; and implementation of the final prototype. A limited number of students from non-technical disciplines (e.g., psychology, graphic arts and design, education and communications disciplines, etc.) are able to enroll in the course as non-programmers who participate in all aspects of the projects except implementation.
Style: 40% Lecture, 30% Discussion. in-class exercises and practice of techniques
Grading: 25% mid exam, 60% special projects, 15% other evaluation. Note: all are approximate figures
Exam Format: combined short and medium-length questions

CSCI 5204 Advanced Computer Architecture
3 credit(s); prereq 4203 or EE 4363 credit will not be granted if credit received for: 8203, EE 8365;
Instructor: Yew, Pen-Chung
Description: Student may contact the instructor or department for information.

CSCI 5211 Data Communications and Computer Networks
3 credit(s); prereq [4061 or instr consent ]; basic knowledge of [computer architecture, operating systems, probability], grad student; Credit will not be granted if credit has been received for: CSCI 4211;
Instructor: He, Tian
Description: Student may contact the instructor or department for information.

CSCI 5271 Introduction to Computer Security
3 credit(s); prereq 4061 or equiv or instr consent ;
CSCI 5304 Computational Aspects of Matrix Theory
3 credit(s); prereq 2031 or 2033 or instr consent;
Instructor: Saad,Yousef
Description: Student may contact the instructor or department for information.

CSCI 5421 Advanced Algorithms and Data Structures
3 credit(s); prereq 4041 or instr consent;
Instructor: Janardan,Ravi
Description: Student may contact the instructor or department for information.

CSCI 5481 Computational Techniques for Genomics
3 credit(s); prereq 4041 or instr consent;
Instructor: Kuang,Rui
Description: Student may contact the instructor or department for information.

CSCI 5511 Artificial Intelligence I
3 credit(s); prereq [2011 or instr consent], grad student;
Credit will not be granted if credit has been received for:
CSCI 4511W;
Instructor: Papanikolopoulos,Nikolaos P
Description: Student may contact the instructor or department for information.

CSCI 5521 Pattern Recognition
3 credit(s); prereq [2031 or 2033], STAT 3021 or instr consent;
Instructor: Boley,Daniel L
Description: Student may contact the instructor or department for information.

CSCI 5523 Introduction to Data Mining
3 credit(s); prereq 4041 or equiv or instr consent;
Instructor: Kumar,Vipin
Description: This course will give a rapid and vigorous introduction to the field of data mining, as well as provide extensive hands-on experience via small data mining projects. Topics include the following: data pre-processing techniques, data types, similarity measures, data visualization/exploration; predictive models (e.g., decision trees, SVM, Bayes, K-nearest neighbors, bagging, boosting) and model evaluation techniques; clustering (hierarchical, partitional, density-based), association analysis, anomaly detection; case studies from areas such as earth science, the Web, network intrusion, and genomics.

CSCI 5551 Introduction to Intelligent Robotic Systems
3 credit(s); prereq 2031 or 2033 or instr consent;
Instructor: Roumeliotis,Stergios

CSCI 5707 Principles of Database Systems
3 credit(s); prereq [4041 or instr consent], grad student;
Credit will not be granted if credit has been received for:
CSCI 4707;
Instructor: Shekhar,Shashi
Description: Student may contact the instructor or department for information.

CSCI 5801 Software Engineering I
3 credit(s); prereq [1902, 2011] or instr consent;
Instructor: Heimdahl,Mats
Description: Advanced introduction to software engineering intended for graduate students. Software life cycle; development models; software requirements analysis; introduction to software design, coding, testing, and maintenance.
Style: 100% Lecture.

CSCI 5980 Special Topics in Computer Science
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Interrante,Victoria
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Carlis,John Vincent
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Dovolis,Chris John
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Collins,John
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Karypis,George
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Whalen,Michael W
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Hopper,Nicholas J
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Yew,Pen-Chung
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Zhang,Zhi-Li
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Barry, Phillip
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Konstan, Joseph Andrew
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Boley, Daniel L
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Papanikolopoulos, Nikolaos P
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Natarajan, Ravi
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Saad, Youssef
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Sturtivant, Carl
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Kumar, Vipin
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Tripathi, Anand R
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Du, David Hung-Chang
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Heimdahl, Mats
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Shekhar, Shashi
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Gini, Maria L
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Riedl, John T
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Konstan, Joseph Andrew
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
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Instructor: Konstan, Joseph Andrew
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Boley, Daniel L
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Papanikolopoulos, Nikolaos P
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Natarajan, Ravi
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Saad, Youssef
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Sturtivant, Carl
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Kumar, Vipin
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Tripathi, Anand R
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Du, David Hung-Chang
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Heimdahl, Mats
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Shekhar, Shashi
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Gini, Maria L
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Riedl, John T
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Konstan, Joseph Andrew
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Boley, Daniel L
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Papanikolopoulos, Nikolaos P
Description: Student may contact the instructor or department for information.

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1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Natarajan, Ravi
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CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Saad, Youssef
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1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
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Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
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Description: Student may contact the instructor or department for information.

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Description: Student may contact the instructor or department for information.

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Instructor: Shekhar, Shashi
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CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Gini, Maria L
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Instructor: Riedl, John T
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Konstan, Joseph Andrew
Description: Student may contact the instructor or department for information.
CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Meyer, Gary W
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Van Wyk, Eric
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Banerjee, Arindam
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Roumeliotis, Stergios
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Kim, Yongdae
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Chandra, Abhishek
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Zhai, Antonia Bingheng
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Mokbel, Mohamed F
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Banerjee, Arindam
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Myers, Chad Leighton
Description: Student may contact the instructor or department for information.

CSCI 5991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Keefe, Dan F
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Isler, Ibrahim Volkan
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Carlis, John Vincent
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Dovolis, Chris John
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Collins, John
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Karypis, George
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Hopper, Nicholas J
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Whalen, Michael W
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Yew, Pen-Chung
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Zhang, Zhi-Li
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
Instructor: Barry, Phillip
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent; may be repeated for cr;
CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Boley, Daniel L
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Papanikolopoulos, Nikolaos P
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Heimdahl, Mats
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Tripathi, Anand R
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Saad, Yousef
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Sturtivant, Carl
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Kumar, Vipin
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Tripathi, Anand R
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Du, David Hung-Chang
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Heimdahl, Mats
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Konstan, Joseph Andrew
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Boley, Daniel L
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Papanikolopoulos, Nikolaos P
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Heimdahl, Mats
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Van Wyk, Eric
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Terveen, Loren Gilbert
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Roumeliotis, Stergios
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Kim, Yongdae
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Chandra, Abhishek
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Zhai, Antonia Bingheng
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Mokbel, Mohamed F
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Banerjee, Arindam
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Myers, Chad Leighton
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Keefe, Dan F
Description: Student may contact the instructor or department for information.

CSCI 5994 Directed Research
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent; may be repeated for cr;
Instructor: Isler, Ibrahim Volkan
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training
S-N only, 1 credit(s), max credits 3, 3 completions allowed; prereq [CSci or CompE] major, instr consent;
Instructor: Carlis, John Vincent
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training
S-N only, 1 credit(s), max credits 3, 3 completions allowed; prereq [CSci or CompE] major, instr consent;
Instructor: Dovolos, Chris John
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training
S-N only, 1 credit(s), max credits 3, 3 completions allowed; prereq [CSci or CompE] major, instr consent;
Instructor: Collins, John
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training
S-N only, 1 credit(s), max credits 3, 3 completions allowed; prereq [CSci or CompE] major, instr consent;
Instructor: Karypis, George
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training
S-N only, 1 credit(s), max credits 3, 3 completions allowed; prereq [CSci or CompE] major, instr consent;
Instructor: Whalen, Michael W
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training
S-N only, 1 credit(s), max credits 3, 3 completions allowed; prereq [CSci or CompE] major, instr consent;
Instructor: Yew, Pen Chung
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training
S-N only, 1 credit(s), max credits 3, 3 completions allowed; prereq [CSci or CompE] major, instr consent;
Instructor: Hopper, Nicholas J
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training
S-N only, 1 credit(s), max credits 3, 3 completions allowed; prereq [CSci or CompE] major, instr consent;
Instructor: Zhai, Bingheng
Description: Student may contact the instructor or department for information.
Instructor: Boley, Daniel L  
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training  
S-N only, 1 credit(s), max credits 3, 3 completions allowed;  
prereq [CSci or CompE] major, instr consent;  
Instructor: Papanikolopoulos, Nikolaos P  
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training  
S-N only, 1 credit(s), max credits 3, 3 completions allowed;  
prereq [CSci or CompE] major, instr consent;  
Instructor: Riedl, John T  
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training  
S-N only, 1 credit(s), max credits 3, 3 completions allowed;  
prereq [CSci or CompE] major, instr consent;  
Instructor: Janardan, Ravi  
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training  
S-N only, 1 credit(s), max credits 3, 3 completions allowed;  
prereq [CSci or CompE] major, instr consent;  
Instructor: Saad, Yousef  
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training  
S-N only, 1 credit(s), max credits 3, 3 completions allowed;  
prereq [CSci or CompE] major, instr consent;  
Instructor: Sturtivant, Carl  
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training  
S-N only, 1 credit(s), max credits 3, 3 completions allowed;  
prereq [CSci or CompE] major, instr consent;  
Instructor: Kumar, Vipin  
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training  
S-N only, 1 credit(s), max credits 3, 3 completions allowed;  
prereq [CSci or CompE] major, instr consent;  
Instructor: Tripathi, Anand R  
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training  
S-N only, 1 credit(s), max credits 3, 3 completions allowed;  
prereq [CSci or CompE] major, instr consent;  
Instructor: Du, David Hung-Chang  
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training  
S-N only, 1 credit(s), max credits 3, 3 completions allowed;  
prereq [CSci or CompE] major, instr consent;  
Instructor: Heimdahl, Mats  
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training  
S-N only, 1 credit(s), max credits 3, 3 completions allowed;  
prereq [CSci or CompE] major, instr consent;  
Instructor: Shekhar, Shashi  
Description: Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training

Student may contact the instructor or department for information.

CSCI 5996 Curricular Practical Training

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<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Schedule</th>
<th>Prerequisites</th>
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</thead>
<tbody>
<tr>
<td>CSCI 5996 Curricular Practical Training</td>
<td>S-N only, 1 credit(s), max credits 3, 3 completions allowed; \prereq [CSci or CompE] major, instr consent;</td>
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<td>Instructor: Terveen, Loren Gilbert</td>
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<tr>
<td>CSCI 8001 Introduction to Research in Computer Science I</td>
<td>A-F only, 1 credit(s); \prereq 1st yr CS PhD student;</td>
<td></td>
<td>Instructor: Janardan, Ravi</td>
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<td></td>
<td>Description: Student may contact the instructor or department for information.</td>
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<tr>
<td>CSCI 8101 Advanced Operating Systems</td>
<td>3 credit(s); \prereq 5103 or instr consent;</td>
<td></td>
<td>Instructor: Weissman, Jon B</td>
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<tr>
<td>CSCI 8161 Advanced Compiler Techniques</td>
<td>3 credit(s); \prereq 4061 or instr consent;</td>
<td></td>
<td>Instructor: Zhai, Antonia Bingheng</td>
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<tr>
<td>CSCI 8271 Security and Privacy in Computing</td>
<td>A-F only, 3 credit(s); \prereq [5211, 5103] or instr consent; 5471 or EE 5248 or Math 5248 or equiv recommended;</td>
<td></td>
<td>Instructor: Kim, Yongdae</td>
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<td>CSCI 8551 Intelligent Agents</td>
<td>3 credit(s); \prereq 5511 or instr consent;</td>
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<td>Instructor: Gini, Maria L</td>
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<tr>
<td>CSCI 8715 Spatial Databases and Applications</td>
<td>3 credit(s); \prereq 4707 or 5707 or GIS 5571 or GIS 5573;</td>
<td></td>
<td>Instructor: Shekhar, Shashi</td>
</tr>
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<td></td>
<td>Description: Student may contact the instructor or department for information.</td>
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<td></td>
</tr>
</tbody>
</table>
CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Zhang,Zhi-Li
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Barry,Phillip
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Konstan,Joseph Andrew
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Boley,Daniel L
Description: Student may contact the instructor or department for information.

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S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Papanikolopoulos,Nikolaos P
Description: Student may contact the instructor or department for information.

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Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Saad,Yousef
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Lilja,David J
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CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Sturtivant,Carl
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Instructor: Du,David Hung-Chang
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S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: He,Tian
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Instructor: Schrater,Paul Robert
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Srivastava,Jaideep
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Interrante,Victoria
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Weissman,Jon B
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Heimdahl,Mats
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Nadathur,Gopalan
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Meyer,Gary W
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Van Wyk,Eric
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Terveen,Loren Gilbert
Description: Student may contact the instructor or department for information.

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CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Kim,Yongdae
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Chandra,Abhishek
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Banerjee,Arindam
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Myers,Chad Leighton
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Keefe,Dan F
Description: Student may contact the instructor or department for information.

CSCI 8760 Plan B Project
S-N only, 3 credit(s); prereq CSci MS student, instr consent;
Instructor: Isler,Ibrahim Volkan
Description: Student may contact the instructor or department for information.

CSCI 8980 Special Advanced Topics in Computer Science
3 credit(s), max credits 27, 9 completions allowed; prereq instr consent;
Instructor: Roumeliotis,Stergios
Description: Student may contact the instructor or department for information.

CSCI 8980 Special Advanced Topics in Computer Science
3 credit(s), max credits 27, 9 completions allowed; prereq instr consent;
Instructor: Keefe,Dan F
Description: Student may contact the instructor or department for information.

CSCI 8980 Special Advanced Topics in Computer Science
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Zhai,Antonia Bingheng
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Carlis,John Vincent
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Collins,John
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Karypis,George
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Hopper,Nicholas J
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Whalen,Michael W
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Yew,Pen-Chung
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Roumeliotis,Stergios
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Zhai,Antonia Bingheng
Description: Student may contact the instructor or department for information.
CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Barry, Phillip
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Konstan, Joseph Andrew
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Boley, Daniel L
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CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
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CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Srivastava, Jaideep
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CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Interrante, Victoria
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CSCI 8991 Independent Study
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Instructor: Schrater, Paul Robert
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Hsu, Wei Chung
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: He, Tian
Description: Student may contact the instructor or department for information.

CSCI 8991 Independent Study
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;
Instructor: Nadathur, Gopal
Description: Student may contact the instructor or department
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1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent ;
Instructor: Meyer, Gary W
Description: Student may contact the instructor or department for information.

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1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent ;
Instructor: Van Wyk, Eric
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Instructor: Keefe, Dan F
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CSCI 8994 Directed Research in Computer Science
1-3 credit(s), max credits 9, 9 completions allowed; prereq
instr consent ;
Instructor: Roumeliotis, Stergios
Description: Student may contact the instructor or department for information.

CSCI 8994 Directed Research in Computer Science
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Instructor: Kim, Yongdae
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CSCI 8994 Directed Research in Computer Science
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1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent 
Instructor: Srivastava, Jaideep
Description: Student may contact the instructor or department for information.

CSCI 8994 Directed Research in Computer Science
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent 
Instructor: Interrante, Victoria
Description: Student may contact the instructor or department for information.

CSCI 8994 Directed Research in Computer Science
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent 
Instructor: Srivastava, Jaideep
Description: Student may contact the instructor or department for information.

CSCI 8994 Directed Research in Computer Science
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent 
Instructor: Heidtke, Mats
Description: Student may contact the instructor or department for information.
for information.

**CSCI 8994 Directed Research in Computer Science**  
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;  
**Instructor:** Van Wyk, Eric  
**Description:** Student may contact the instructor or department for information.

**CSCI 8994 Directed Research in Computer Science**  
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;  
**Instructor:** Terveen, Loren Gilbert  
**Description:** Student may contact the instructor or department for information.

**CSCI 8994 Directed Research in Computer Science**  
1-3 credit(s), max credits 9, 9 completions allowed; prereq instr consent;  
**Instructor:** Roumeliotis, Stergios  
**Description:** Student may contact the instructor or department for information.

**CMGT 3001 Introduction to Construction Management**  
2 credit(s); prereq 30 sem cr;  
**Instructor:** Kuehni, Rose Marie  
**Description:** Introduction to construction and processes that shape our environment. A discussion of the construction industry, key participants and their vocabulary, building systems, planning and scheduling, project delivery systems, construction documents, sustainability, and project management. Course consists of lectures, site visits, guest speakers.

**CMGT 3001 Introduction to Construction**  
3 credit(s);  
**Instructor:** Kuehni, Rose Marie  
**Description:** Introduction to construction and processes that shape our environment. A discussion of the construction industry, key participants and their vocabulary, building systems, planning and scheduling, project delivery systems, construction documents, sustainability, and project management. Course consists of lectures, site visits, guest speakers.

**CMGT 3011 Construction Plan Reading**  
2 credit(s);  
**Instructor:** Kuehni, Rose Marie  
**Description:** Introductory level course in construction plan reading and construction documents. Course materials include architectural, civil, mechanical, electrical drawings and project manual. The emphasis is on the development of skills necessary for the reading, understanding and interpretation of commercial construction plans and project manuals, including notes, symbols, and plan layout. This course is appropriate for third year Construction Management and CALA students, and at any time for students in IT and other colleges.

**CMGT 4012 Risk Management, Bonds, and Insurance**  
2 credit(s); prereq 3001, 45 sem cr;  
**Instructor:** STAFF  
**Description:** Identification and evaluation of property, liability, and financial risks of a construction project. Tools of risk control and risk financing. Review of insurance coverage, contract bonds, and underwriting factors.
CMGT 4013 Legal and Ethical Issues in Construction  
3 credit(s); prerequisite 4011 or equiv or instructor consent;  
Instructor: Mackay, Deborah  
Description: Examination of role of construction management professional in society. Broad principles of conduct for construction management professional as well as specific goals to be achieved in professional performance and behavior and reviews of mandatory requirements.

CMGT 4021 Construction Planning and Scheduling  
3 credit(s); prerequisite 3001, [3011 or CE 4101], 45 sem cr;  
Instructor: Sylvand, Kenneth Andre  
Description: Concepts of project planning, scheduling, and control. Understanding project scheduling models with emphasis on the critical path method. Introduction to the techniques used in the industry utilizing commercial software on personal computers. The importance of periodic updating and analysis of schedules and of considering and understanding alternatives will be stressed.

CMGT 4022 Construction Estimating  
3 credit(s); prerequisite 3001, [3011 or CE 4101], 45 sem cr;  
Instructor: Adhamson, Mark Richard  
Description: Student may contact the instructor or department for information.

CMGT 4031 Construction Safety and Loss Control  
3 credit(s); prerequisite 3001, 45 sem cr;  
Instructor: Carroll, Mii  
Description: Introduction to construction safety, health, and loss control. Hazard recognition, Control procedures, Management systems for measuring/evaluating loss-control performances in construction industry.

CMGT 4193 Directed Study  
1-4 credit(s), max credits 12, 3 completions allowed; prerequisite admitted to CMgt major or minor or certificate;  
Instructor: STAFF  
Description: Topic arranged with B.A.S. Construction Management academic adviser. [See B.A.S. Web site at www.cce.umn.edu/bas for additional course information.]

CMGT 4196 Construction Management Internship  
S-N only, 1-4 credit(s), max credits 12, 3 completions allowed; prerequisite [CMgt major or minor or certificate student], [jr or sr], dept consent;  
Instructor: STAFF  
Description: Career preparation in construction management. Students will gain hands-on work experiences in a construction company, applying coursework in the work place, contributing knowledge of best practices to make a positive impact on the construction industry, and participate in career development exercises. Professional experience internship requirement for BASc in Construction Management. May take course maximum of 3 times at maximum 4 credits for total of 12 credits maximum. 1 credit equivalent to 1 month of internship.

CMGT 4562 Building Envelope Design and Construction  
A-F only, 2 credit(s); prerequisite Concurrent registration is required (or allowed) in 4542, Concurrent registration is required (or allowed) in 4572 or professional experience;  
Instructor: Campbell, Dave William  
Description: Student may contact the instructor or department for information.

CMGT 4572 Structural Frames and Building Design/Construction  
A-F only, 3 credit(s); prerequisite 3001, [AEM 2011 or BP 3001 or BP 3101] Credit will not be granted if the student has already completed Arch 4571 or Arch 4572;  
Instructor: STAFF  
Description: Investigation of basic contemporary structural systems in masonry, steel and wood framing systems. An exploration of forms and performance of these systems.

Continuing Dental Education  
6-406 Moos Tower

CDED 7303 Postgraduate Contemporary Esthetic Dentistry:  
Level III--Dental Implants  
S-N only, 2 credit(s);  
Instructor: Olin, Paul S  
Description: Student may contact the instructor or department for information.

CDED 7306 Postgraduate Contemporary Esthetic Dentistry:  
Level III--Diagnostic Box  
S-N only, 1 credit(s);  
Instructor: Olin, Paul S  
Description: Student may contact the instructor or department for information.

Cultural Studies and Comparative Literature  
235 Nicholson Hall

CSCL 1001 Introduction to Cultural Studies: Rhetoric, Power, Desire  
4 credit(s); Meets CLE req of Arts/Humanities; meets CLE req of Diversity and Soc Justice US;  
Instructor: Brown Jr., Robert L  
Description: How did we become who we are? How did we become "women" or "men." "gay" or "straight." Where did we get our tastes in clothes, food, music, and decorative arts? And where did we get our political, religious and philosophical beliefs, our sense of what's logical, natural, and believable? Cultural Studies assumes that the world around us (our culture) means, and that its meanings are central in creating us--individually and collectively. And it assumes culture can be "read." CSCL 1001 explores cultural reading, examining the "texts" around us: music videos, television and film, some paintings and photographs, magazine ads, poetry, a graphic novel, science and science journalism, and some "practices" from everyday life: dress, manners and body decoration. The "rhetoric" of culture transmits a view of the world and our loyalty to that view. Its systems of "power" hold us and our texts into large, historical conversations and struggles over ideas and social positions. And the operations of "desire" direct who and what we love, where we find pleasure and how these pleasures figure in the process of making and reproducing culture. It's a basic course for majors and non-majors interested in making sense of their worlds.  
Style: 20% Lecture, 20% Discussion, 40% Small Group Activities, 20% Web Based. Active-learning class with participation figuring largely in grade. On-line community / blog activity throughout course.  
Grading: 15% final exam, 30% special projects, 20% journal, 15% class participation, 20% other evaluation. Many engaging, short, blog-based and group activities throughout the course. Do what we tell you, and you'll do just fine.  
Exam Format: open-book; short, guided answers

CSCL 1201 Introduction to Cinema and Media Culture  
4 credit(s); Credit will not be granted if credit has been received for: SCMC 1201; Meets CLE req of Arts/Humanities;  
Instructor: STAFF  
Description: The emergence of what is variously referred to as the "Information Age" and "Society of the Spectacle" has made it necessary for us to think critically about the media. Since visual media have the most pervasive influence on our everyday lives, this course will focus on how forms such as advertising, film, and television work, affect perception, and structure meaning. We will read some of the most important theoretical and historical texts that provide insight into our "ways of seeing." No prior exposure to media theory is expected, but although this is an introductory
class, students will be expected to read and work through challenging material. We will read a variety of critics who have attempted to analyze cinema and media culture and we will also begin to develop a vocabulary for formal visual analysis.

**CSCL 1301W Reading Culture: Theory and Practice**

4 credit(s); Meets CLE req of Arts/Humanities; meets CLE req of Writing Intensive;

*Instructor: STAFF*

**Description:** CSCL 1301W Reading Culture: Theory and Practice 4 credits; meets Lib Ed req of Other Humanities Core; meets Lib Ed req of Writing Intensive Instructor: STAFF

**Description:** This course turns on one central question: How do things ‘mean?’ Specifically, how do cultural texts mean in relation to each other and to human life in society and across history? ‘Cultural texts’ are made objects and forms of communication that encode messages and values, and that produce effects—anything from movies, TV shows, magazine ads and rock concerts to ‘high art’ (paintings, classical music, plays, poems, etc.). The course specifically examines: (1) the role played by cultural forms in creating, maintaining or challenging social boundaries and power relationships; and (2) the ways art and culture function as sites where creative and alternative visions of ‘the good life’ come into being. Small classes emphasize close reading, discussion, and practice in critical writing. An introductory course in every sense, it’s a good place to start thinking about what “culture” is and how it works. It will also help you develop reading and writing techniques useful for many courses and majors.

**Class Time:** 40% lecture, 60% discussion

**CSCL 1401W Reading Literature: Theory and Practice**

4 credit(s); Meets CLE req of Literature; meets CLE req of Writing Intensive;

*Instructor: STAFF*

**Description:** CSCL 1401W Reading Literature: Theory and Practice 4 credits; meets Lib Ed req of Literature Core; meets Lib Ed req of Writing Intensive Instructor: STAFF

**Description:** What is Literature? How do definitions of it differ over time and across cultures? How does literature play a role in the ways people see themselves and others? How do our histories - personal and cultural - determine how we read it? CSCL 1401W examines such questions in relation to larger patterns of culture and power.

You’ll emerge from the course with a solid sense of the differences among various genres, and the cultural contexts from which they arise - between an epic poem emerging from a Greek city state and a novel by a German civil servant, say. Small classes emphasize close reading, discussion, and practice in critical writing. An introductory course in every sense, it will help you develop a vocabulary for formal visual analysis as well as reading and writing skills useful in many other courses and disciplines.

**Class Time:** 40% lecture, 60% discussion

**CSCL 1501W Reading History: Theory and Practice**

4 credit(s); Meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;

*Instructor: STAFF*

**Description:** CSCL 1501W Reading History: Theory and Practice 4 credits; meets Lib Ed req of Historical Perspective Core; meets Lib Ed req of Writing Intensive Instructor: STAFF

**Description:** What is history - is it what we get on The History Channel, or is something else? Who controls it, who decides what gets included and what's important? Why has history become such a hot political topic - textbooks in schools, for example? This course examines such questions, starting from two assumptions: (1) that history can have explanatory power - it can tell us why things got to be the way they are; but (2) that all history comes to us in a mediated way, that is, as a "text" that encodes someone's or some group's version of it. Small classes focus on reading a variety of texts "in" history - the Mall of America, a Nazi rally, a 17th century Dutch painting; "history on television," the representation of the human body, etc., as well as some critical theory "about" history, designed to help you think about its importance, its uses and abuses.

**Class Time:** 40% lecture, 60% discussion

**CSCL 1910W Freshman Seminar**

A-F only, 3 credit(s), max credits 6; prereq freshman; Meets CLE req of Writing Intensive;

*Instructor: Hubbard, Kysa Koerner*

**Description:** Student may contact the instructor or department for information.

**CSCL 1910W Freshman Seminar**

A-F only, 3 credit(s), max credits 6; prereq freshman; Meets CLE req of Writing Intensive;

*Instructor: Casarino, Cesare*

**Description:** Student may contact the instructor or department for information.

**CSCL 1921 Introduction to Film Study**

4 credit(s); Credit will not be granted if credit has been received for: ARTH 1921W; Meets CLE req of Arts/Humanities;

*Instructor: STAFF*

**Description:** This course is about movies—what they are, how they work, and ways we can watch, read, and enjoy them with a critical eye. Our basic questions are: How do films make meaning? How do they construct a world for us, while (often) giving the impression that that constructed world is natural and inevitable? How do films position us as viewers and shape us as subjects? What is the relation between the film text and the political economy of the industry? We'll look at a wide variety of films from different times and places and consider some of the rich diversity of writing known collectively as Film Theory. This is a basic introductory course designed for those who love going to the movies, but want to understand them better.

**CSCL 3115 Cinema and Ideology**

4 credit(s); Meets CLE req of Arts/Humanities;

*Instructor: Ganguly, Keya*

**Description:** This is a course in film criticism and theories of ideology. Our concern will be to gain a critical perspective on the problem of ideology as it pertains to the cinema (rather than with the ideological content of films per se—though that too will be addressed). Theorizing issues of cinema and ideology requires that we have a shared understanding of (1) film form: how the technical apparatus of film functions to produce ideological understandings of the world; (2) film content: how ideology is inscribed in and through filmic narrative; and (3) film spectatorship: how (and whether) the ways that viewers are positioned to make sense of themselves and the world have implications for social relations at large (outside the cinema).

Using formal, theoretical and interpretive arguments, we will attempt to formulate an educated sense of how, as viewers, we project onto each other and to human life in society and across history?

**Class Time:** 20% final exam, 20% reports/papers, 10% special
projects. -4 reading tests (20%) -10 discussions (10%) -1 textual analysis essay (20%)

CSCL 3465 Aliens
3 credit(s);
Instructor: Mowitt, John W
Description: Aliens. This is a word that we use to designate both people from other countries and beings from other worlds. Indeed, a currently popular television program, "Aliens in America," relies on this linguistic association. The English language is not unique in this respect, but in this seminar we will resist the temptation to reduce this fact to mere word play. More specifically, instead of debating the currently irresolvable question of whether there is extra-terrestrial life, we will explore whether our actual interactions with people from other countries (direct or indirect; benign or hostile) affect our interest in, anxiety about, fear of, desire to encounter, etc. beings from other worlds. In effect, for us the overriding concern will not be, what are "they" trying to do to us, but rather, what are we using "them" to do either to or for ourselves. The Western idea that there are "multiple worlds" is very old. One finds discussion of this in Plato, for example. After a brief backward glance at Fontenelle's Conversations on the Plurality of Worlds we will pick up the story at the end of the 19th century when Percival Lowell and others not only thought life on Mars had been discovered, but began a line of speculation that led to proposing radio as a way to communicate with it. Contact was finally "made" on Halloween in 1938 when the Mercury Theater Company broadcast the panic inducing "War of the Worlds" radio program. Not surprisingly, Germans were thought to be animating the Martian war ships. As this example suggests, the role of media as the network or channel through which we encounter "them" will figure prominently in the seminar. Thus, we will consider objects such as novels, radio broadcasts, films etc, but--as is characteristic of the field of cultural studies--we will approach these objects from an interdisciplinary vantage point that includes the concerns of sociology, philosophy, psychology/psychoanalysis, literary criticism and history. Even if the truth is "out there," the question remains: the truth about what?

CSCL 5301 Society, Ideology, and the Production of Art
3 credit(s);
Instructor: Ganguly, Keya
Description: This is an upper-division course for advanced undergraduates and graduate students. Given the course's broad designation, we will attempt to sharpen our focus on the relationships between ideology, social norms, and aesthetic practice by taking a thematic approach to these relationships. The thematic with which we will concern ourselves is that of "visuality": its history, institutions, theories, and problems. Students will be expected to bring them a certain familiarity with cultural studies and social theory or to pick it up along the way (since an upper-division course cannot also serve as a primer on "theory"). Our collective project will be to examine, in a variety of primary and secondary source materials, the ways that visual issues define aspects of modernity, give them historical and ideological inflection, as well as constrain modes of thinking and practice. The final two weeks of the quarter will address a particular site of representation where the question of visuality has been of political and historical importance, that of the colonial encounter.
Style: 75% Lecture, 25% Discussion.
Grading: 20% mid exam, 40% final exam, 30% reports/papers, 10% class participation.
Exam Format: short answer, essay

CSCL 5910 Topics in Cultural Studies and Comparative Literature
3 credit(s), max credits 24, 8 completions allowed;
Instructor: Hueser, Rembert
Description: Student may contact the instructor or department for information.

Curriculum and Instruction
145 Peik Hall

CI 1001 Introduction to the Elementary School
A-F only, 3 credit(s);
Instructor: Hansen, Sarah Elizabeth
Description: Student may contact the instructor or department for information.

CI 1903 Freshman Seminar: Citizenship and Public Ethics
1-3 credit(s), max credits 6; prereq Fr; Meets CLE req of Civic Life and Ethics;
Instructor: Englund, Lynn A.
Description: Students in this class look at historic and contemporary examples of intentional communities to see what ideals for social change motivated their formation. Students also discuss the communities in which they participate to think about what it is to bring intention to what we do. And we create an intentional community within our classroom where people get to know each other and share stories from their experience and
comment on readings and videos. There are four reflective essays and a final paper, but no tests or exams.

**Style:** 10% Film/Video, 65% Discussion, 10% Small Group Activities, 10% Presentation, 5% Guest Speakers. Students share stories from their experience to help connect course concepts to lived experience of family and community life.

**Grading:** 15% reports/papers, 40% reflection paper, 5% in-class presentation, 40% class participation. On-time class attendance and in-class participation is important. Participation includes listening attentively to others and being prepared to share your response to readings and videos.

**Exam Format:** No exams.

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**CI 1903 Freshman Seminar: Citizenship and Public Ethics**

1-3 credit(s), max 6 credits; prereq Fr; Meets CLE req of Civic Life and Ethics;

**Instructor:** King PhD, Kendall Amy

**Description:** Student may contact the instructor or department for information.

**CI 1910W Freshman Seminar, Writing Intensive**

3 credit(s); Meets CLE req of Writing Intensive;

**Instructor:** King PhD, Kendall Amy

**Description:** Student may contact the instructor or department for information.

**CI 2311W Introduction to Technology and Ethics in Society**

3 credit(s); prereq will not be granted if credit already received for: WHRE 3011W or CI 3311W; Credit will not be granted if credit has been received for: CI 4311W; Meets CLE req of Civic Life and Ethics; meets CLE req of Writing Intensive;

**Instructor:** Pazurek, Angelica

**Description:** This is a discussion-based course established as an introductory exploration of values and ethical issues relating to technology. We focus our attention on the public's engagement with technology as we critically evaluate technology's affordances and potential contributions to social problems. An ethical understanding of technology's influence involves the acquisition of insight in order to help us to make decisions about what is good or bad, right or wrong, just or unjust, and to recognize the ambiguity inherent in the public's pervasive use of technology.

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**CI 3211 Introduction to Elementary Teaching**

A-F only, 3 credit(s); prereq [Elementary ed or early childhood ed foundations major], concurrent practicum experience;

**Instructor:** Byrn, Katherine Margaret

**Description:** Student may contact the instructor or department for information.

**CI 3211 Introduction to Elementary Teaching**

A-F only, 3 credit(s); prereq [Elementary ed or early childhood ed foundations major], concurrent practicum experience;

**Instructor:** DeLapp, Peggy Reed

**Description:** Student may contact the instructor or department for information.

**CI 4311W Technology and Ethics in Society**

3 credit(s); prereq credit will not be granted if credit already received for: CI 3311, WHRE 5011W; Credit will not be granted if credit has been received for: CI 2311W; Meets CLE req of Civic Life and Ethics; meets CLE req of Writing Intensive;

**Instructor:** Pazurek, Angelica

**Description:** This is a discussion-based course established as a critique and analysis of values and ethical issues relating to technology. We focus our attention on the public's engagement with technology as we critically evaluate technology's affordances and potential contributions to social problems. An ethical understanding of technology's influence involves the acquisition of insight in order to help us to make decisions about what is good or bad, right or wrong, just or unjust, and to recognize the ambiguity inherent in the public's pervasive use of technology.

**CI 5065 Improving Art Programs in the Schools**

A-F only, 3 credit(s); prereq Initial lic students majoring in art ed;

**Instructor:** Bequette, James W

**Description:** Issues of art instruction, including teaching methods and evaluation, philosophical frameworks of pedagogy, and institutional issues concerning art programs in primary and secondary schools; social and cultural structures of schooling, practical issues of teaching art.

**CI 5096 Art Education: Practicum**

A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;

**Instructor:** STAFF

**Description:** Issues of art instruction, including teaching methods and evaluation, philosophical frameworks of pedagogy and institutional issues concerning art programs in primary and secondary schools. Practicum requiring students to work in a public school setting.

**CI 5177 Practical Research**

A-F only, 3 credit(s); prereq CI MEd student, or CI or EdPA Teacher Leadership MEd student;

**Instructor:** STAFF

**Description:** Preparation for identifying a research and development topic, reviewing the existing knowledge on the topic, planning and carrying out a project, further investigating the topics, and writing a report on the project.

**CI 5181 Clinical Experience in Elementary School Teaching**

S-N only, 2-8 credit(s), max credits 16, 3 completions allowed; prereq Foundations of education and elem ed initial licensure only;

**Instructor:** Carlson, Ann Ruhl

**Description:** Students spend full days in the elementary classroom gradually assuming responsibility for teaching the class. Students prepare a portfolio based on criteria given. One seminar per week.

**CI 5181 Clinical Experience in Elementary School Teaching**

S-N only, 2-8 credit(s), max credits 16, 3 completions allowed; prereq Foundations of education and elem ed initial licensure only;

**Instructor:** Tank, Kristina Maruyama

**Description:** Student may contact the instructor or department for information.

**CI 5183 Applying Instructional Methods in the Elementary Classroom**

S-N only, 1-2 credit(s), max credits 8, 4 completions allowed; prereq Foundations of ed major or elem ed initial licensure only;

**Instructor:** DeLapp, Peggy Reed

**Description:** Student may contact the instructor or department for information.

**CI 5186 School-Related Projects**

A-F only, 1-4 credit(s), max credits 4, 1 completion allowed; prereq MEd student;

**Instructor:** STAFF

**Description:** Research or evaluation project related to teaching, curriculum, or other aspect of schooling. Approved and supervised by faculty adviser.

**CI 5187 Practicum: Improvement of Teaching in Elementary or PreKindergarten Schools**

S-N only, 2-3 credit(s), max credits 3, 1 completion allowed; prereq MEd student in elem or early childhood ed;

**Instructor:** STAFF

**Description:** Elementary school classroom teaching project designed to improve specific teaching skills. Approved and directed by advisor.

**CI 5190 Directed Individual Study in Curriculum and Instruction**
CI 5300 Teaching Introductory Computer Concepts and Skills
A-F only, 1-3 credit(s), max credits 3, 1 completion allowed;
prereq credit will not be granted if credit already received for: BIE 5463;
Instructor: Cherry, Jennifer E
Description: Directs students to individual studies that focus on producing and evaluating curriculum materials; literature review of issues and problems; and assessing curriculum processes.

CI 5303 Data Analysis and Information Design for Business and Education
3 credit(s); prereq credit will not be granted if credit already received for: BIE 5013;
Instructor: Horazdovsky PhD, Jerry Edward
Description: Students research, use, and evaluate technologies for distance learning and design their own learning environments.

CI 5304 Data Management for Online Integration
3 credit(s); prereq credit will not be granted if credit already received for: BIE 5014;
Instructor: Roggenkamp, Joel D
Description: Directs students to individual studies that focus on producing and evaluating curriculum materials; literature review of issues and problems; and assessing curriculum processes.

CI 5305 Integrated Computer Applications in Business and Marketing Education
3 credit(s); prereq credit will not be granted if credit already received for: BIE 5015;
Instructor: Hook, Leslie Hall
Description: Directs students to individual studies that focus on producing and evaluating curriculum materials; literature review of issues and problems; and assessing curriculum processes.

CI 5325 Designing and Developing Online Distance Learning
A-F only, 3 credit(s); prereq 5351 or 5362 recommended;
Instructor: Doering, Aaron H
Description: Directs students to individual studies that focus on producing and evaluating curriculum materials; literature review of issues and problems; and assessing curriculum processes.

CI 5330 Topics in Instructional Systems and Technology
1-3 credit(s), max credits 12, 12 completions allowed;
Instructor: Scharber, Cassie Marie
Description: Topics related to needs of in-service teachers. Topics, location, credits, and duration are flexible.

CI 5331 Introduction to Learning Technologies
3 credit(s);
Instructor: Doering, Aaron H
Description: This course is designed to prepare you to become knowledgeable and comfortable in the field of learning technologies (LT). Upon completing this course you will understand the history of the LT field; understand what LT is along with the theoretical foundations of the field; be able to discuss the role of LT in education and the workplace; know and understand the major debates and articles of the LT field; and be able to write, communicate, and present your knowledge of the LT field. This is a great course to begin your learning technologies experience!

CI 5336 Planning for Multimedia Design and Development
3 credit(s);
Instructor: Miller, Charles De Vaughn
Description: Theory, research, practice in instructional design. Generic components of instructional design process. Applying principles to design/development of computer-based instructional materials.

CI 5351 Technology Tools for Educators
A-F only, 3 credit(s);
Instructor: STAFF
Description: Develop skills in using selected technology applications to support teaching and learning. Internet applications, presentation software, multimedia authoring tools, desktop publishing software, Web page creation. May also include a field-site project.

CI 5361 Teaching and Learning with the Internet
3 credit(s); prereq credit will not be granted if credit already received for: BIE 5662;
Instructor: Donna, Joel Dominic
Description: Directs students to individual studies that focus on producing and evaluating curriculum materials; literature review of issues and problems; and assessing curriculum processes.

CI 5363 New Media and Interaction Design for Web-based Learning
3 credit(s); prereq credit will not be granted if credit already received for: WHRE 5628;
Instructor: Hatten, Jim
Description: Directs students to individual studies that focus on producing and evaluating curriculum materials; literature review of issues and problems; and assessing curriculum processes.

CI 5365 Contemporary Software Development Issues and Tools
3 credit(s); prereq Familiar with standard computer/Internet operations;
Instructor: Miller, Charles De Vaughn
Description: Directs students to individual studies that focus on producing and evaluating curriculum materials; literature review of issues and problems; and assessing curriculum processes.

CI 5390 Learning Technologies Field Experiences
S-N only, 1-3 credit(s), max credits 3, 3 completions allowed;
prereq Students in teachers of computers/keyboarding/related technology applications additional licensure program;
Instructor: Cherry, Jennifer E
Description: Directs students to individual studies that focus on producing and evaluating curriculum materials; literature review of issues and problems; and assessing curriculum processes.

CI 5410 Special Topics in the Teaching of Literacy
1-3 credit(s), max credits 12, 12 completions allowed;
Instructor: Lensmire, Timothy J.
Description: Directs students to individual studies that focus on producing and evaluating curriculum materials; literature review of issues and problems; and assessing curriculum processes.
complementary) ways. Historian Matthew Jacobson helps us understand the historical fabrication, changeability, and contingencies of whiteness, with an eye to the power relations and social hierarchies that are generated. In her National Settings and the larger educational community, and find that while it is often muted (as in Mica Pollock's ethnographic study), it also always has the potential of exploding into loud controversy (as in the debate over Ebonics, chronicled by Theresa Perry and Lisa Delipt). And we examine the work and lives of teachers and students in schools, with the help of Bob Fecho's writing on his attempt to teach English in progressive ways and Daniel Yon's research with youth as they create identities in global times.

Finally, we complicate and revise our emerging ideas one last time, as we work with texts and films chosen by members of the class. As educators, scholars, and citizens, we have responsibilities to participate intelligently and critically in conversations about school and society especially as school and society continue to privilege some at the expense of others. The main goal and method of this course is to bring our own ideas about education, race, and literacy into dialogue with the ideas of others?other members of the class, as well as various researchers and writers. In this process, we will revise and better articulate our images of and commitments to a worthy education for all of our children and fellow citizens.

**CI 5410 Special Topics in the Teaching of Literacy**

1-3 credit(s), max credits 12, 12 completions allowed

**Instructor:** O'Brien, David

**Description:** Student may contact the instructor or department for information.

**CI 5413 Foundations of Reading**

A-F only, 3 credit(s)

**Instructor:** Israelson, Madeleine Sarah Heins

**Description:** CI 5413 FOUNDATIONS OF READING Course Description The course is designed to acquaint future pre K -6 preservice teachers (PTs) with how reading develops and how assessments can be used to understand typical and struggling readers. PTs will learn about the foundations of reading processes, including phonemic awareness, phonics, fluency, vocabulary development, comprehension, and students' motivation to read. In later coursework, PTs will learn about specific instructional techniques and their application. This course also involves tutoring individual children in reading and other literacy practices. Course Goals/Objectives Upon completion of this course each student will have demonstrated knowledge of, or competency in, the following: The Minnesota reading standards for early childhood/elementary teachers and the Minnesota Statute 122A.06, Subdivision 4, (see statement after course calendar and grading procedures). Theoretical frameworks that undergird the process of reading and its development, including language and linguistic foundations and how oral language is related to facility with written language. Research on reading processes used to inform teachers' understanding of reading and students' literacy learning. Research on comparisons between traditional print literacies and digital media and literacies. Research on motivation and engagement and its importance for K-6 learners. Research undergirding the development of comprehensive and balanced K-6 curriculum in reading, and what this instruction looks like. Approaches to assessment and types of assessment tools used to establish reading proficiency and engagement.

**CI 5417 Elementary literacy Instruction for ESL Students**

A-F only, 3 credit(s); prereq Bachelor's degree completed

**Instructor:** Helman, Lori A

**Description:** This course is designed for teacher candidates and practicing teachers who work with students from diverse linguistic backgrounds. Topics include teaching reading and writing in the elementary grades to students from diverse languages; second-language literacy development; and the role of phonemic awareness, phonics, fluency, vocabulary, comprehension in students' success. We explore many hands-on ways to assess students' learning, find and use appropriate instructional methods, and connect the literacy curriculum to students' background knowledge and experiences. Textbooks include: Helman, L. A. (Ed.) (2009). Literacy Development with English Learners: Research-Based Instruction in Grades K-6. New York: The Guilford Press. Bear, D. R., Helman, L. A., Templeton, S., Invernizzi, M. & Johnston, F. (2007). Words their way with English learners: Word study for phonics, vocabulary and spelling instruction. Upper Saddle River, NJ: Pearson/Merrill Prentice Hall.

**Style:** 25% Lecture, 5% Film/Video, 30% Discussion, 25% Small Group Activities, 10% Student Presentation, 5% Demonstration.

**Grading:** 30% Reports/Papers, 30% Special Projects, 40% Reflection paper. A portion of the reflection papers will be conducted on line.

**CI 5425 Reading Instruction in the Elementary Grades**

A-F only, 3 credit(s); prereq [Elementary or early childhood] licensure student

**Instructor:** Jacobson, Mary J.

**Description:** Curricular/methodological issues in teaching of reading. Reading/orthographic processes, strategy instruction for word recognition/comprehension, authentic assessment strategies, and teaching diverse students.

**CI 5426 Language Arts Instruction in the Elementary Grades**

A-F only, 3 credit(s); prereq Elementary or early childhood licensure student

**Instructor:** Jacobson, Mary J.

**Description:** Student may contact the instructor or department for information.

**CI 5432 Instructional Leadership in Preventing Reading Difficulties**

A-F only, 3 credit(s); prereq 5434

**Instructor:** Helman, Lori A

**Description:** Research-based reading instruction for elementary grades. How to help other teachers improve practice. Characteristics of effective schools within context of improving students' reading achievement.

**CI 5435 Instructional Leadership in Reading in Kindergarten and the Elementary Grades**

A-F only, 3 credit(s)

**Instructor:** Peterson, Debra Stevens

**Description:** Research-based reading instruction for elementary grades. How to help other teachers improve practice. Theory/research behind preventing reading difficulties. Principles/techniques for assessing reading difficulties and students progress.

**Style:** 30% Lecture, 30% Discussion, 15% Small Group Activities, 15% Demonstration, 10% Web Based.

**Grading:** 15% final exam, 10% reports/papers, 75% special projects. Tutoring of a struggling reader required.

**CI 5442 Literature for Adolescents**

A-F only, 3 credit(s)

**Instructor:** Brendler, Beth

**Description:** Student may contact the instructor or department for information.

**CI 5452 Reading in the Content Areas for Initial Licensure Candidates**

A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prereq Enrolled in Initial Licensure Program, concurrent enrollment in licensure area methods course(s), Internet access, basic understanding of computer use, Web browsers, e-mail, word-processing software

**Instructor:** O'Brien, David

**Description:** Student may contact the instructor or department for information.

**CI 5472 Teaching Film, Television, and Media Studies**
CI 5496 Directed Experiences in Teaching English
A-F only, 3 credit(s); prereq MED/initial licensure students in English ed only;
Instructor: STAFF
Description: Student teaching/clinical experience for English
post-baccalaureate students only.
Grading: No exams. Posts, comments, and papers using a blog.

CI 5502 Teaching Science and Health in the Elementary School
A-F only, 3 credit(s); prereq M.Ed./elementary education initial licensure;
Instructor: Johnson, Roger T
Description: Methods and materials for teaching science and health at the elementary school level.

CI 5502 Teaching Science and Health in the Elementary School
A-F only, 3 credit(s); prereq M.Ed./elementary education initial licensure;
Instructor: Upadhyay, Bhaskar
Description: Methods and materials for teaching science and health at the elementary school level.

CI 5504 Elementary School Science: Materials and Resources
3 credit(s); prereq Elem tchg exper or instr consent;
Instructor: Johnson, Roger T
Description: Student may contact the instructor or department for information.

CI 5531 Teaching Middle School Science
A-F only, 3 credit(s); prereq Initial licensure student in science ed;
Instructor: Billington, Barbara Lynne
Description: Student may contact the instructor or department for information.

CI 5540 Special Topics: Science Education
3 credit(s), max credits 12, 12 completions allowed;
Instructor: Finley, Fred N
Description: Student may contact the instructor or department for information.

CI 5540 Special Topics: Science Education
1-8 credit(s), max credits 12, 12 completions allowed;
Instructor: Alchini, Douglas
Description: Student may contact the instructor or department for information.

CI 5631 Second Language Curriculum Development and Assessment
A-F only, 3 credit(s); prereq SLC initial licensure only;
Instructor: Ranney, Susan Elaine
Description: Developing skills for selecting, organizing, providing, and assessing effective second language learning opportunities through study, practice, and reflection.

CI 5632 Literacy and Language Development in Second Language Classrooms
A-F only, 3 credit(s); prereq SLC initial licensure only;
Instructor: King PhD, Kendall Amy
Description: Comprehension and communication processes in a second language focus on listening, speaking, reading and writing; techniques for initial to advanced literacy instruction; fundamental principles of effective second language instruction; the relationship of culture to proficiency in the four modalities; traditional and alternative approaches to assessing language proficiency; use of technology to enhance instruction.

CI 5646 English Grammar for ESL Teachers
3 credit(s); prereq LING 5001 or instr consent;
Instructor: Ranney, Susan Elaine
Description: English syntax from pedagogical perspective. Grammatical structures that challenge ESL learners. Analyzing learner errors. Issues/activities related to teaching grammar in ESL contexts.

CI 5651 Foundations of Second Languages and Cultures Education
A-F only, 3 credit(s);
Instructor: Martel, Jason Peter
Description: Student may contact the instructor or department for information.

CI 5656 Teaching Literacy in Second Language Classrooms
A-F only, 3 credit(s);
Instructor: Bigelow, Martha
Description: The course provides a background to inquiry in the areas of second/foreign language reading and writing. Participants are given a wide range of options to choose from to meet their own professional and intellectual interests. This project encourages lifelong learning by starting students on the path to continuing to deepen their understanding of the second/foreign language literacy and of current pedagogical approaches to the teaching of literacy across many second language classroom settings. This course explicitly addresses, through critical pedagogical approaches, how culture and community-specific literacies can find their way into language curricula in order to facilitate both first language maintenance and second language acquisition.

CI 5658 Foreign Language Testing and Assessment
A-F only, 3 credit(s);
Instructor: Tedick, Diane J
Description: Student may contact the instructor or department for information.

CI 5660 Special Topics in the Teaching of Second Languages and Cultures
1-4 credit(s), max credits 12, 12 completions allowed;
Instructor: Walker, Constance L
Description: Student may contact the instructor or department for information.

CI 5672 Language-Focused Instructional Practices and Strategies for Dual Language/Immersion Classrooms
3 credit(s); prereq instr consent;
Instructor: Tedick, Diane J
Description: Student may contact the instructor or department for information.

CI 5693 Directed Study in Second Languages and Cultures
1-4 credit(s), max credits 4, 1 completion allowed; prereq Instr consent;
Instructor: STAFF
Description: Individual or group work on curricular, instructional, or assessment problems.

CI 5696 Practicum: Teaching World Languages and Cultures in Elementary Schools
2-6 credit(s), max credits 6, 1 completion allowed; prereq 5619, adviser approval; credits cannot be counted on a graduate degree program for endorsement candidates;
Instructor: STAFF
Description: Teaching and learning experiences in second languages and cultures at the elementary school level. Requires students to work in a public school setting.
CI 5697 Practicum: ESL in the Elementary School
2-6 credit(s), max credits 6, 1 completion allowed; prereq Adviser approval;
Instructor: STAFF
Description: Teaching and learning experiences in an English as a second language setting at the elementary school level. Requires students to work in a public school setting.

CI 5698 Student Teaching in Second Languages and Cultures
2-6 credit(s), max credits 14, 5 completions allowed; prereq Adviser approval; credits cannot be counted on a graduate degree program;
Instructor: STAFF
Description: Student teaching in Second Languages and Cultures at the secondary level for teachers already licensed in another field. Requires students to work in a public school setting.

CI 5699 Clinical Experiences in Second Languages
A-F only, 6-8 credit(s), max credits 16; prereq SLC initial licensure program only;
Instructor: Martel, Jason Peter
Description: Teaching and learning experiences in elementary and secondary second language instructional settings. Includes seminars held concurrently to support the student teaching experience.

CI 5699 Clinical Experiences in Second Languages
A-F only, 6-8 credit(s), max credits 16; prereq SLC initial licensure program only;
Instructor: Ennser-Kananen, Johanna
Description: Teaching and learning experiences in elementary and secondary second language instructional settings. Includes seminars held concurrently to support the student teaching experience.

CI 5702 Teaching Social Studies in the Elementary School
A-F only, 3 credit(s); prereq M.Ed./elementary education initial licensure;
Instructor: Engebretson, Kathryn Ellerhoff
Description: Student may contact the instructor or department for information.

CI 5743 The Social Sciences and the Social Studies
A-F only, 3 credit(s); prereq Secondary social studies initial licensure student;
Instructor: Beaton, Jehanne Helena
Description: Student may contact the instructor or department for information.

CI 5822 Teaching Mathematics in the Elementary School
A-F only, 3 credit(s); prereq M.Ed./elementary education initial licensure;
Instructor: STAFF
Description: Principles of learning pertinent to the modern program of mathematics in elementary grades. Objectives, content, philosophy, instructional materials and methods of instruction and evaluation.

CI 5900 Special Topics in Family, Youth, and Community
2 credit(s), max credits 20, 20 completions allowed;
Instructor: Ellison, Jane Randolph
Description: Student may contact the instructor or department for information.

CI 5900 Special Topics in Family, Youth, and Community
1 credit(s), max credits 20, 20 completions allowed;
Instructor: Walker, Susan K
Description: Student may contact the instructor or department for information.

CI 5902 Family Education Perspectives
A-F only, 3 credit(s);
Instructor: Englund, Lynn A.
Description: Students in family education (and those who will have professional roles working with families) will examine and appreciate the multiple avenues through which family education has occurred across human history and cultures. Students seek out alternative perspectives of family education and respect historic in articles and documents to deduce underlying motivations and interests, cultural and historical contexts, philosophical orientations, assumptions, and values associated with family education. Students will also study the nature of practical problems encountered by families in their everyday functioning as families. The will consider what family education's perspective should be regarding the nature of these problems and discuss the implications and consequences related to the research and application of family education for programs, educators, and families, and society. Students will formulate and/or clarify their personal perspective of family education. Only the online Web-based section of the course will be offered. Microphone for audio recording is required. No camera/video capability is required.
Style: 100% Web Based.
Grading: 10% reports/papers, 16% reflection paper, 70% class participation, 4% other evaluation. All class participation is conducted online using web and audio (microphone required). No video camera capability is required.

CI 5922 Family and Consumer Sciences Curriculum in Grades 5-12
A-F only, 3 credit(s); prereq ILP student credit will not be granted if credit received for: FE 5302;
Instructor: STAFF
Description: Examination, development, and implementation of family and consumer sciences curriculum in grades 5-12.

CI 5925 Family and Consumer Sciences Student Teaching II
2 credit(s); prereq 5924;
Instructor: Lundell, Amy Jo
Description: Part-time supervised teaching experience in family and consumer sciences programs. Guided by on-campus seminars that emphasize reflective teaching practice and student learning in the context of middle and high schools.

CI 5932 Introduction to Parent Education
A-F only, 1 credit(s);
Instructor: STAFF
Description: Overview of the philosophy, history, and models of parent education; introduction to ethical and critically reflective professional practice.

CI 5937 Parent-Child Interaction
A-F only, 3 credit(s); prereq will not be granted if credit received for: FE 5712;
Instructor: Cline, Heather Marie
Description: Student may contact the instructor or department for information.

CI 5943 Parent Learning and Development: Implications for Parent Education
A-F only, 2 credit(s);
Instructor: Walker, Susan K
Description: Students will examine adult, adolescent, and parent learning and development from the perspective of their relevance for parent education. Research information and a variety of theoretical perspectives will be presented and critiqued. Personal professional development will be facilitated through challenging assumptions and examining knowledge and competencies required for parent educators. This course meets a requirement for the Teachers of Parent and Family Education Minnesota Board of Teaching license. Course Goals: Students will: Analyze theories of adolescent, adult, and parent learning and development and their implications for parent education. Explore the nature of attachment and reciprocity in parent-child relationships. Examine how the context of parenting impacts parent-child relationships and parent development and learning. Develop insight into the parenting experience and development of parents through reflection on the lives of parents and theories of learning and development. Gain insight into professional development and parent education.
through critical reflection on one’s assumptions about parent learning and development NOTE: This is an 8 week, ONLINE course.

**Style:** 60% Discussion.

**Grading:** 62% written homework, 38% class participation.

**CI 5944 Parent Education Curriculum**
A-F only, 2 credit(s); prereq 5943 or instr consent;
Instructor: Walker, Susan K
**Description:** How parent learning/development, child development, and family systems theories influence curriculum approaches/materials in parent education. Student develop construct, critique, and select curriculum.

**CI 5945 Teaching and Learning in Parent Education**
A-F only, 2 credit(s); prereq 5943 or instr consent;
Instructor: Buzzetta, Chris Anthony
**Description:** Student may contact the instructor or department for information.

**CI 8131 Curriculum and Instruction Core: Critical Examination of Curriculum in Context**
A-F only, 3 credit(s); prereq CI PhD or MA student or instr consent;
Instructor: Lensmire, Timothy J.
**Description:** Student may contact the instructor or department for information.

**CI 8132 Curriculum and Instruction Core: Teaching Theory and Research**
A-F only, 3 credit(s); prereq CI PhD or MA student or instr consent;
Instructor: Bequette, James W
**Description:** Student may contact the instructor or department for information.

**CI 8133 Research Methods in Curriculum and Instruction**
A-F only, 3 credit(s); prereq CI PhD or MA student or instr consent;
Instructor: Upadhyay, Bhaskar
**Description:** Survey of educational research methods, comparison of underlying assumptions/procedures.

**CI 8148 Conducting Qualitative Studies in Educational Contexts**
3 credit(s); prereq CI MA or PhD student or instr consent;
Instructor: Dillon, Deborah R.
**Description:** Student may contact the instructor or department for information.

**CI 8150 Research Topics Curr & Instruc**
1-6 credit(s), max credits 12, 12 completions allowed; prereq [M.A. or Ed.D or Ph.D.] student or instr consent;
Instructor: Swiss, Thom
**Description:** Student may contact the instructor or department for information.

**CI 8151 Paradigms and Practices in Teacher Preparation**
A-F only, 3 credit(s); prereq Grad student;
Instructor: Sato, Mistilina
**Description:** Student may contact the instructor or department for information.

**CI 8155 Immigrant Families and U.S. Schools**
A-F only, 3 credit(s);
Instructor: Ngo, Bic
**Description:** Student may contact the instructor or department for information.

**CI 8159 Culture and Teaching Colloquium**
A-F only, 3 credit(s), max credits 6;
Instructor: Chhuon, Vichel
**Description:** Student may contact the instructor or department for information.

**CI 8161 Research Experience I: Study Design and Planning**
OPT No Aud, 3 credit(s); prereq [8133, 6-12 cr of research methodology, CI PhD student] or instr consent;
Instructor: Bigelow, Martha
**Description:** Student may contact the instructor or department for information.

**CI 8161 Research Experience I: Study Design and Planning**
OPT No Aud, 3 credit(s); prereq [8133, 6-12 cr of research methodology, CI PhD student] or instr consent;
Instructor: Moore, Tamara J.
**Description:** Student may contact the instructor or department for information.

**CI 8196 Practicum in Teaching in Colleges of Education**
1 credit(s); prereq 8181;
Instructor: Avery, Patricia Grant
**Description:** Student may contact the instructor or department for information.

**CI 8412 Research in Reading**
3 credit(s), max credits 6; prereq [MA or PhD] student;
Instructor: O’Brien, David
**Description:** Theory of and research on reading process. Applications to developing writing curriculum/instruction.

**CI 8595 Problems: Science Education**
1-6 credit(s), max credits 12, 12 completions allowed; prereq CI grad student or instr consent;
Instructor: Johnson, Roger T
**Description:** Independent research.

**CI 8691 Readings in Second Languages and Cultures Education**
1-3 credit(s), max credits 3, 1 completion allowed; prereq instr consent;
Instructor: Ranney, Susan Elaine
**Description:** Independent reading.

**CI 8691 Readings in Second Languages and Cultures Education**
1-3 credit(s), max credits 3, 1 completion allowed; prereq instr consent;
Instructor: Ngo, Bic
**Description:** Independent reading.

**CI 8695 Problems: Second Languages and Cultures Education**
1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Tedick, Diane J
**Description:** Student may contact the instructor or department for information.

**CI 8795 Problems: Social Studies Education**
1-6 credit(s), max credits 12, 12 completions allowed; prereq CI grad student or instr consent;
Instructor: Avery, Patricia Grant
**Description:** Student may contact the instructor or department for information.

**CI 8796 Research Internship in Social Studies Education**
A-F only, 1-6 credit(s), max credits 6, 1 completion allowed; prereq CI grad student;
Instructor: Avery, Patricia Grant
**Description:** Student may contact the instructor or department for information.

**Dakota 19 Scott Hall**

**Dakota 1121 Beginning Dakota I**
5 credit(s); Credit will not be granted if credit has been
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Credit(s)</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNCE 1101</td>
<td>Ballet Technique 1</td>
<td>STAFF</td>
<td>1</td>
<td></td>
<td>This class is the first of the two-semester sequence of fundamental ballet technique. Classwork is based on the practical application of the principles of classical ballet technique, including body alignment and placement, strength, flexibility, coordination and musicality. By the end of the semester students should be able to understand a basic level of ballet vocabulary and be able to execute it with ease and confidence.</td>
</tr>
<tr>
<td>DNCE 1110</td>
<td>Ballet Technique 3</td>
<td>STAFF</td>
<td>2</td>
<td>max credits 4;</td>
<td>This is the first of an eight-semester sequence of jazz dance technique/style. Class work will focus on fundamental jazz vocabulary and movement. Emphasis will be on basic understanding of proper body placement, clear articulation and basic mechanics of jazz movement, and basic rhythm patterns. Improvisation will be introduced as a tool to gain a better understanding of one's movement potential.</td>
</tr>
<tr>
<td>DNCE 1201</td>
<td>Jazz Technique 1</td>
<td>STAFF</td>
<td>1</td>
<td></td>
<td>This class will introduce vocabulary and develop technical skills using a variety of jazz dance styles while increasing flexibility, groundedness and strength. This will include more complex weight changes, rhythm patterns, changes of direction and balances. Dancers will increase their understanding of musicality, dynamics, style and improvisation and explore a basic understanding of the history of jazz music style.</td>
</tr>
<tr>
<td>DNCE 1301</td>
<td>Tap Technique 1</td>
<td>STAFF</td>
<td>1</td>
<td></td>
<td>This studio class will focus on the fundamentals of tap dance with an emphasis on musicality and rhythm. Students will learn basic footwork and combinations and beginning time steps. Students will also be introduced to exercises for tap dance improvisation.</td>
</tr>
<tr>
<td>DNCE 1001</td>
<td>Modern Dance Technique 1</td>
<td>STAFF</td>
<td>1</td>
<td></td>
<td>This course is a basic introduction to modern dance technique. Emphasis will be placed on successful performance of the fundamental elements that comprise modern dance technique. This will include class warm-up, center floor sequences and combinations, and movement patterns that move across and through space. This course will also include basic elements of dance improvisation as well as fundamental anatomical understanding. Classes will be based on the exploration of the elements of time, space and energy while emphasizing alignment, flexibility, strength, clarity and efficiency of movement.</td>
</tr>
<tr>
<td>DNCE 1010</td>
<td>Modern Dance Technique 3</td>
<td>STAFF</td>
<td>2</td>
<td>max credits 4;</td>
<td>This is the third of an eight-semester sequence of jazz dance technique/style. This class will introduce vocabulary and develop technical skills using a variety of jazz dance styles while increasing flexibility, groundedness and strength. This will include more complex weight changes, rhythm patterns, changes of direction and balances. Dancers will increase their understanding of musicality, dynamics, style and improvisation and explore a basic understanding of the history of jazz music style.</td>
</tr>
<tr>
<td>DNCE 1210</td>
<td>Jazz Technique 3</td>
<td>STAFF</td>
<td>1</td>
<td>max credits 2;</td>
<td>This class will introduce vocabulary and develop technical skills using a variety of jazz dance styles while increasing flexibility, groundedness and strength. This will include more complex weight changes, rhythm patterns, changes of direction and balances. Dancers will increase their understanding of musicality, dynamics, style and improvisation and explore a basic understanding of the history of jazz music style.</td>
</tr>
<tr>
<td>DNCE 1120</td>
<td>Jazz Technique 5</td>
<td>STAFF</td>
<td>1</td>
<td></td>
<td>This class will introduce vocabulary and develop technical skills using a variety of jazz dance styles while increasing flexibility, groundedness and strength. This will include more complex weight changes, rhythm patterns, changes of direction and balances. Dancers will increase their understanding of musicality, dynamics, style and improvisation and explore a basic understanding of the history of jazz music style.</td>
</tr>
<tr>
<td>DNCE 1201</td>
<td>Jazz Technique 1</td>
<td>STAFF</td>
<td>1</td>
<td></td>
<td>This class will introduce vocabulary and develop technical skills using a variety of jazz dance styles while increasing flexibility, groundedness and strength. This will include more complex weight changes, rhythm patterns, changes of direction and balances. Dancers will increase their understanding of musicality, dynamics, style and improvisation and explore a basic understanding of the history of jazz music style.</td>
</tr>
<tr>
<td>DNCE 1301</td>
<td>Tap Technique 1</td>
<td>STAFF</td>
<td>1</td>
<td></td>
<td>This studio class will focus on the fundamentals of tap dance with an emphasis on musicality and rhythm. Students will learn basic footwork and combinations and beginning time steps. Students will also be introduced to exercises for tap dance improvisation.</td>
</tr>
</tbody>
</table>

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
DNCE 1313 African Based Movement
1 credit(s);
Instructor: STAFF
Description: This course will focus on varied movement of the African Diaspora, primarily West Africa, but not limited to the West African region or the continent of Africa. Class will include traditional movement, but will also focus on movement inspired by Africa, the Caribbean, and the African Diaspora at large. Coursework includes in-class movement participation, one movement midterm, and one two-page paper.

DNCE 1323 Swing Dance
1 credit(s);
Instructor: STAFF
Description: This course will cover the traditional swing dances popular in the United States during the 1930s and through the early 1960s. Each week new movements and figures will be taught and previous dances will be reviewed. To increase the learning process, students will be expected to change partners throughout class.

DNCE 1331 Yoga
1 credit(s);
Instructor: STAFF
Description: This course will give a basic introduction to the theory and practice of Yoga. The class will introduce the student to standing postures, forward bends and twists, balancing and seated postures, inversions, back bends, and guided relaxation and meditation. Course objectives include proper alignment, proper weight placement, body awareness, relaxation, and breathing techniques. Assignments will include a midterm paper and a movement demonstration final.

DNCE 1343 Hip Hop Movement
OPT No Aud, 1 credit(s);
Instructor: Sarge,Kenna Jean
Description: Hip hop's forms: old school, popping, locking, breaking, contemporary choreography, social dances. History, culture, technique. Warm-up, strength/endurance applications, choreography, cool down. Lecture, demonstration, practice.

DNCE 1349 Contact Improvisation
1 credit(s);
Instructor: STAFF
Description: This class will provide a safe, clear introduction to the dance form Contact Improvisation. Students will learn technical skills such as the rolling point of contact, supporting and being supported, falling and recovering, connecting with the center as a source and support for movement. Classes will include a warm up designed to connect the body in order to dance with a sense of ease and power. Students will learn the fundamental principles of contact improvisation through skill work and through the experience of improving with other people.

DNCE 1351 African Diasporic Movement 1
OPT No Aud, 1 credit(s);
Instructor: Brown,Patricia
Description: Student may contact the instructor or department for information.

DNCE 1353 African Diasporic Movement 3
OPT No Aud, 1 credit(s); prereq 1352 or audition or instr consent ;
Instructor: Silva Dos Santos,Marciano
Description: Student may contact the instructor or department for information.

DNCE 1601 Dance Improvisation
A-F only, 1 credit(s); prereq Concurrent registration in a modern dance technique course, dept consent;
Instructor: STAFF
Description: This course is the first part of a six-semester sequence in Dance Composition. Classwork consists of exploration of individual ways of moving via the improvisational process. Students will link this exploration to the fundamental elements of dance: time, space, and energy. Students will also examine metered time, musical phrasing, movement speed, shape, and quality. Focus will be placed on using various improvisational and choreographic structures to express a movement idea. Course objectives include exploring the creative process, discovering individual movement vocabulary, and experimenting with structural devices in dance.

DNCE 1626 Music for Dance
3 credit(s); prereq dept consent ; Meets CLE req of Arts/Humanities;
Instructor: STAFF
Description: This course will examine the basics of music with continual reference to music/dance interactions. While striving to hear more and more when listening to music, students will also learn copious terminology to describe what they hear. Classwork will also include honing basic rhythm skills, working with notation, playing percussion and discussion of the ways music and dance can combine.

DNCE 3010 Modern Dance Technique 5
2 credit(s), max credits 4; prereq dept consent , audition;
Instructor: STAFF
Description: This course is the fifth level of eight levels of modern dance technique offered in the Dance Program. The purpose of the technique class is to allow the intermediate modern dance student to explore and discover him/herself as an articulate and expressive mover. Classwork continues to involve space, time and energy with specific emphasis on alignment, power, momentum, articulation, clarity of intent, musicality, strength, stretch, and stamina. Class consists of in-place warm-ups, technical exercises and dance phrases applying the technique addressed. Successful completion of previous level or departmental approval by audition required for registration
Style: Studio

DNCE 3110 Ballet Technique 5
2 credit(s), max credits 4; prereq dept consent , audition;
Instructor: STAFF
Description: This course is the fifth level of an eight-semester sequence in classical ballet. This course offers the intermediate ballet student principles of ballet technique. Classwork will involve strong emphasis on proper alignment of the body, dynamic timings, and a command of ballet terminology. The class format will begin with barre, followed by a period of stretching. Turning and jumping will be re-introduced at the barre and subsequently transferred to the center. Centerwork will include all aspects of ballet technique including port de bras, adagio, turns, petite allegro and grade allegro. As the semester progresses, the combinations will become more complex. A constant correlation between barre and centerwork will be explored.

DNCE 3210 Jazz Technique 5
1 credit(s), max credits 2; prereq dept consent , audition;
Instructor: STAFF
Description: This is the fifth of an eight-semester sequence of jazz dance technique/style. Classwork will concentrate on the development of a clear understanding of the eclectic range of jazz dance and its various styles. Movement vocabulary will cover styles from the American vernacular to more contemporary styles of today. In addition to the established techniques from the previous levels, focus will be placed on off-center movements, floor work and a variety of turns and jumps. Emphasis will be on individual style, working on clarity of movement, and improvisation. Successful completion of previous level or departmental approval by audition required for registration.
Style: Studio

DNCE 3301 Tap Technique 3
1 credit(s); prereq 1302 or instr consent;
Instructor: STAFF
Description: This course is the third in a six-semester sequence of tap dance technique. This studio class will focus on intermediate skills of tap dance including pick-ups, pull-backs and wings. There will be a continuing emphasis on musicality and rhythm. The class will practice intermediate footwork and...
combinations, time steps, tap dance routines, and improvisation exercises.

DNCE 3311 Contemporary Indian Dance
OPT No Aud, 1 credit(s); prereq instr consent ;
  Instructor: Chatterjea, Ananya
  Description: Student may contact the instructor or department for information.

DNCE 3334 Introduction to Dance/Movement Therapy
2 credit(s); prereq dept consent ;
  Instructor: Nordstrom-Loeb, Barbara E
  Description: This course is a basic introduction to the field of Dance/Movement Therapy. It will include 1) historic and theoretical perspectives on the use of movement and dance in relationship to psychology and healing; 2) an introduction to some of the major Dance/Movement Therapy pioneers and techniques; and 3) a brief introduction to ways that Dance/Movement Therapy is used with various populations and in a variety of settings. The class is both experiential and didactic. Objectives: The student will be able to: describe the field of Dance/Movement Therapy in relationship to related disciplines such as Dance, Psychology, Creative Arts Therapies, Somatics and Complementary and Alternative Therapies; identify and discuss the basic premises, theory and approaches of Dance/Movement Therapy; be familiar with selected Dance/Movement Therapy pioneers and their contribution to the field of Dance/Movement Therapy; understand the uses of Dance/Movement Therapy with selected settings and populations; be familiar with training process and requirements for Dance Movement Therapy certification; apply Dance/Movement Therapy approaches to their own experience.

DNCE 3337 Body Mind Centering
2 credit(s);
  Instructor: STAFF
  Description: This class provides an overview of Body-Mind Centering, a new approach to movement, mind and body developed over the past thirty years by Bonnie Bainbridge Cohen, O.T. Classwork includes improvisational movement explorations, hands-on re-patterning work and discussion designed to give direct experience of the way mind (desire, attention, and intention) is expressed through the various body systems. These systems are the skeletal, organ, muscle, fluid, nervous, and endocrine. In addition, students will study developmental movement, the baby movements that underlie our more complex adult movement. Imagery, touch, and anatomical information will be used as tools to help students access a range of inner sensations and movement experiences. Emphasis will be on the acknowledgement of each individual's unique experience of the body, as well as on the experiences we share as human beings. This class is experiential and includes movement, touch, lecture and class discussion. Students can expect to spend two to three hours per week in outside reading and keeping a journal. There is one quiz and one take home exam.

DNCE 3351 African Diasporic Movement
OPT No Aud, 1 credit(s), max credits 2; prereq 1354 or audition or instr consent ;
  Instructor: Sarge, Kenna Jean
  Description: Student may contact the instructor or department for information.

DNCE 3401W Dance History
3 credit(s); Meets CLE req of Global Perspectives; meets CLE req of Writing Intensive;
  Instructor: STAFF
  Description: Dance History 1 & 2 are basic survey courses that study the development of dance with a primary focus on the West. Beginning with examining notions of 'historiography' and what it means to bring the 'dancing body' within the norms generated by textual and linguistically based disciplines such as history, Dance History 1 goes on to study the different ways that dance seems to have evolved in ancient civilizations such as Egypt, India, and Greece. The first semester of the course then works through the development of dance through church and court in Europe, with occasional perspectives from other cultures, and ends with a focus on the beginnings of ballet in the French court of Louis the XIV.

DNCE 3487W Dance and Citizenship: Land, Migration, and Diaspora
3 credit(s); Meets CLE req of Writing Intensive;
  Instructor: STAFF
  Description: This course is a study of dance and performance as practiced and transformed by Native Americans and minority groups in the United States, marked as the "ethnic body". Emphasis is on migration as a global phenomenon, particularly pertaining to land disputes, labor distribution, political asylum and dislocation. The course also strives to understand the nature of so-called "ethnic practices" in the context of cultural exchange and multiculturalism within United States. The course addresses how the socio-historical perspective of the dance, as practiced, developed and performed in the United States context, exercise the understanding of political identity and citizenship.

DNCE 3602 Dance Composition
3 credit(s); prereq 3601, dept consent ; concurrent regis in a modern dance technique course;
  Instructor: STAFF
  Description: This course is the third part of a six-semester sequence in Dance Composition. Classwork consists of learning tools to create dances that express a personal vision, have developed integrity of form and structure and show a pronounced awareness of one's own individual movement vocabulary. Students will continue to broaden their kinesthetic understanding of the nature of movement improvisation and its relationship to choreographic structure. An understanding and appreciation of the creative process and its application to one's self and other art forms will also be discussed and implemented through assignments in movement and writing.

DNCE 3621 Dance Production I
A-F only, 2 credit(s); prereq Dance major, dept consent ;
  Instructor: STAFF
  Description: In this course students will study the technical and administrative aspects of dance production. This includes lighting, costumes, sound, marketing, stage management, fundraising and publicity. Emphasis will be placed on learning practical project management and personal management skills.

DNCE 4443 Theorizing Dancing Bodies
3 credit(s); prereq 3402W or instr consent ; Credit will not be granted if credit has been received for: DNCE 5443;
  Instructor: STAFF
  Description: Theorizing Dancing Bodies is a discourse-based course with the intention of developing a theoretical base for the newly emerging discipline of Dance Studies and within that, a strong focus on "reading" dance. Working with the premise that Dance Studies, like Performance Studies, is fundamentally different than most other artistic disciplines, in that it has dancing bodies at its center, this course works through various aesthetic and philosophical perspectives and the lens of intersecting race, gender, class, and sexuality, to arrive at a complex consciousness about the impact dancing images can have on the socio-cultural scene.
  Grading: 30% reports/papers, 35% in-class presentation, 35% class participation.
  Exam Format: Essay

DNCE 4602 Dance Composition
3 credit(s); prereq 4601, Concurrent registration is required (or allowed) in modern dance technique course, dept consent ;
  Instructor: STAFF
  Description: This course is the fifth of a six-semester sequence in Dance Composition. Class work will consist of exploration and structuring of dances for groups. Course Objectives include: developing and understanding and appreciation for the craft of group choreography, exploring the creative process, discovering movement vocabulary, and acquiring skills of compositional
DNCE 4901 Senior Seminar
S-N only, 2 credit(s); prereq Sr, [Dnce or Th major]; Credit will not be granted if credit has been received for: TH 4901;
Instructor: STAFF
Description: Development of senior project, alone or in groups, under guidance of faculty members.

DNCE 5010 Modern Dance Technique 7
2 credit(s), max credits 4; prereq dept consent , audition;
Instructor: STAFF
Description: This course is the seventh level of eight levels in modern dance technique. This course will offer a variety of modern dance techniques and styles from various instructors and guest artists. This course is intended for the advanced dance major.

DNCE 5110 Ballet Technique 7
1 credit(s), max credits 2; prereq dept consent , audition;
Instructor: STAFF
Description: This course is the seventh in an eight-semester sequence of ballet technique. This advanced level ballet class will emphasize and further develop the following skills: clarity of arms and head positions, a strong stance, stability and balance, coordination of the joining of steps, use of feet in jumps, the ability to reverse and remember movement combinations.

DNCE 5334 Introduction to Dance/Movement Therapy
2 credit(s); prereq dept consent ;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

DNCE 5443 Theorizing Dancing Bodies
3 credit(s); prereq instr consent ; Credit will not be granted if credit has been received for: DNCE 4443;
Instructor: Chatterjea,Ananya
Description: Theorizing Dancing Bodies is a discourse-based course with the intention of developing a theoretical base for the newly emerging discipline of Dance Studies and within that, a strong focus on ‘reading’ dance. Working with the premise that Dance Studies, like Performance Studies, is fundamentally different than most other artistic disciplines, in that it has dancing bodies at its center, this course works through various aesthetic and philosophical perspectives and the lens of intersecting race, gender, class, and sexuality, to arrive at a complex consciousness about the impact dancing images can have on the socio-cultural scene.

DNCE 5700 Performance
1 credit(s), max credits 4, 4 completions allowed; prereq concurrent enrollment in technique course, dept consent;
Instructor: STAFF
Description: This course is for students in University Dance Theatre.

DNCE 5858 Teaching Dance
4 credit(s); prereq 1020, dept consent , instr consent ;
Instructor: STAFF
Description: This course is an introduction to pedagogy and dance teaching methods. Students will discuss various theories of teaching, the responsibilities when teaching and the craft or art of teaching dance. The class will examine potential students by special interest groups. Time will be spent on small teaching projects dealing with one specific idea, as well as developing individual lesson plans and a series of classes. The students in the class will teach each other as well as develop classes for outside groups. The class will discuss and implement the fulfillment of the goal to coordinate the creative and the technical development of our potential students.

DNCE 5993 Directed Studies
1-4 credit(s), max credits 10, 10 completions allowed; prereq instr consent , dept consent , college consent ;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

DNCE 5993 Directed Studies
1-4 credit(s), max credits 10, 10 completions allowed; prereq instr consent , dept consent , college consent ;
Instructor: Chatterjea,Ananya
Description: Student may contact the instructor or department for information.

Dental Hygiene
9-406 Malcolm Moos Health Sciences Tower

DH 2111 Dental Anatomy
A-F only, 2 credit(s); prereq DH student;
Instructor: Anderson,Jeanne Marie
Description: All deciduous and permanent teeth, including tooth form, function, and relationship to oral health; calcification, eruption, and exfoliation patterns; ideal static occlusion, dental terminology, and tooth annotation systems. Lab includes identification and annotation of teeth and restoration, in wax, of portions of a typodont tooth. Includes content necessary for the practice of dental hygiene. Teaching methods include lecture, large and small group discussion, and laboratory assignments in drawing, carving, and annotating teeth. Textbooks: Woelfel and Scheid, "Dental Anatomy, Its Relevance to Dentistry." Williams and Wilkens Publisher; Dental Anatomy Study Guide. Course only open to students enrolled in the Program in Dental Hygiene.
Style: 40% Lecture, 10% Discussion, 50% Laboratory.
Exam Format: multiple choice

DH 2121 The Dental Hygiene Care Process Clinical Application I
A-F only, 5 credit(s); prereq DH student;
Instructor: Osborn,Joy B
Description:

DH 2132 Head and Neck Anatomy
A-F only, 1 credit(s); prereq DH student;
Instructor: Blue,Christine M
Description: Anatomical structures of the head and neck as they relate to the practice of dental hygiene. Teaching methods include lecture, self-directed study using a CD-ROM, discussion. Textbooks: M. Fehrengach and S. Herring: "Illustrated Anatomy of the Head and Neck.” W.B. Saunders. Course only open to students enrolled in the Program in Dental Hygiene.
Style: CD-ROM
Exam Format: Multiple choice

DH 3133 Pharmacology
A-F only, 2 credit(s); prereq DH student;
Instructor: Kinneberg,Barry J
Description: Student may contact the instructor or department for information.

DH 3211 Biomaterials and Principles of Restorative Techniques I
A-F only, 4 credit(s), max credits 8; prereq DH student;
Instructor: Dittmar,Susan Kyle
Description: Student may contact the instructor or department for information.

DH 3224W Dental Hygiene Care Process: Clinical Application IV
A-F only, 6 credit(s); prereq Dental hygiene student; Meets CLE req of Writing Intensive;
Instructor: Blue,Christine M
Description: Student may contact the instructor or department for information.

DH 3228 Ethics and Jurisprudence for the Dental Hygienist
A-F only, 1 credit(s); prereq Dental hygiene student;
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>DH 5203</td>
<td>The Discipline of Dental Hygiene</td>
<td>Blue, Christine M</td>
<td>A-F only, 2 credit(s); prereq Dental hygiene grad student;</td>
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<td>Description: Student may contact the instructor or department for information.</td>
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<tr>
<td>DH 5405</td>
<td>Curriculum and Course Development</td>
<td>Blue, Christine M</td>
<td>A-F only, 2 credit(s), max credits 4; prereq Dental Hygiene grad student;</td>
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<td>Description: Student may contact the instructor or department for information.</td>
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<tr>
<td>DH 5407</td>
<td>Instructional Strategies for Effective Teaching</td>
<td>Stoltenberg, Jill L</td>
<td>A-F only, 2 credit(s); prereq Dental hygiene grad student;</td>
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<td>Description: Student may contact the instructor or department for information.</td>
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<tr>
<td>DH 5409</td>
<td>Dental Hygiene Clinic Administration</td>
<td>Blue, Christine M</td>
<td>A-F only, 2 credit(s); prereq Dental hygiene grad student;</td>
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<tr>
<td>DH 5411</td>
<td>Administrative Leadership and Professional Development</td>
<td>Blue, Christine M</td>
<td>A-F only, 2 credit(s); prereq Dental hygiene grad student;</td>
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<tr>
<td>DH 5415</td>
<td>Dental Hygiene Supervised Didactic Course Teaching</td>
<td>Blue, Christine M</td>
<td>A-F only, 1-3 credit(s), max credits 6; prereq Dental hygiene grad student;</td>
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<tr>
<td>DH 7777</td>
<td>Thesis</td>
<td>Blue, Christine M</td>
<td>S-N only, 9-10 credit(s), max credits 10, 1 completion allowed; prereq Dental hygiene grad student;</td>
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**Dental Therapy**

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<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>DT 3130</td>
<td>Preclinical Pediatric Dentistry</td>
<td>Yesil, Jasmine</td>
<td>A-F only, 2 credit(s);</td>
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<td>Description: Student may contact the instructor or department for information.</td>
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<tr>
<td>DT 3210</td>
<td>Head and Neck Anatomy</td>
<td>Blue, Christine M</td>
<td>A-F only, 1 credit(s); prereq Accepted into undergrad dental therapy program;</td>
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<td>Description: Student may contact the instructor or department for information.</td>
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<tr>
<td>DT 3231</td>
<td>Oral and Maxillofacial Radiology II</td>
<td>Ahmad, Mansur</td>
<td>A-F only, 1 credit(s); prereq 2d yr dental therapy student;</td>
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<tr>
<td>DT 3330</td>
<td>Clinical Application I</td>
<td>Osborn, Joy B</td>
<td>A-F only, 3 credit(s); prereq Undergrad dental therapy program;</td>
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<td>Description: Student may contact the instructor or department for information.</td>
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</tbody>
</table>
DT 3336 Ethics and Jurisprudence for the Dental Therapist
A-F only, 1 credit(s);
Instructor: Johnson, Kimberly S
Description: Student may contact the instructor or department for information.

DT 3410 Applied Dental Biomaterials
A-F only, 1 credit(s); prereq 2d yr dental therapy student;
Instructor: Combe, Edward Charles
Description: Student may contact the instructor or department for information.

DT 3429 Introduction to Psychomotor Skill Development
S-N only, 1 credit(s); prereq Dental therapy student;
Instructor: Phair, Craig B
Description: Student may contact the instructor or department for information.

DT 3430 Oral Anatomy
A-F only, 2 credit(s); prereq Accepted into dental therapy program;
Instructor: Madden, Michael John
Description: Student may contact the instructor or department for information.

DT 3431 Oral Anatomy Laboratory
A-F only, 2 credit(s); prereq Accepted in dental therapy program;
Instructor: Madden, Michael John
Description: Student may contact the instructor or department for information.

DT 3521 Foundations of Interprofessional Professionalism, Communication and Collaboration
S-N only, 1 credit(s);
Instructor: Blue, Christine M
Description: Student may contact the instructor or department for information.

DT 4140 Preventive Pediatric Dentistry Clinic
A-F only, 1 credit(s);
Instructor: Yesil, Jasmine
Description: Student may contact the instructor or department for information.

DT 5130 Preclinical Pediatric Dentistry
A-F only, 2 credit(s); prereq DT grad program;
Instructor: Yesil, Jasmine
Description: Student may contact the instructor or department for information.

DT 5140 Preventive Pediatric Dental Clinic
A-F only, 1 credit(s);
Instructor: Yesil, Jasmine
Description: Student may contact the instructor or department for information.

DT 5210 Head and Neck Anatomy
A-F only, 1 credit(s); prereq Accepted into master's dental therapy program;
Instructor: Blue, Christine M
Description: This course will cover the anatomical structures of the head and neck as they relate to dental therapy treatment.
Style: 85% Lecture, 5% Film/Video, 10% Discussion.

DT 5210 Head and Neck Anatomy
A-F only, 1 credit(s); prereq Accepted into master's dental therapy program;
Instructor: Eliason, Sandra Jean
Description: This course will cover the anatomical structures of the head and neck as they relate to dental therapy treatment.
Style: 85% Lecture, 5% Film/Video, 10% Discussion.

DT 5231 Oral and Maxillofacial Radiology II
A-F only, 1 credit(s);
Instructor: Ahmad, Mansur
Description: Student may contact the instructor or department for information.

DT 5330 Clinical Application I
A-F only, 3 credit(s); prereq Accepted into master's dental therapy program;
Instructor: Osborn, Joy B
Description: This course will cover the dental therapy care process, assessment principles related to medical and oral health status, dental therapy clinical procedures and development of instrumentation skills.

DT 5334W Dental Therapy Care Process: Clinical Application II
A-F only, 4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Blue, Christine M
Description: Student may contact the instructor or department for information.

DT 5410 Applied Dental Biomaterials
A-F only, 1 credit(s); prereq 2nd yr DT student;
Instructor: Combe, Edward Charles
Description: Student may contact the instructor or department for information.

DT 5429 Introduction to Psychomotor Skill Development
S-N only, 1 credit(s); prereq In dental therapy program;
Instructor: Phair, Craig B
Description: Student may contact the instructor or department for information.

DT 5430 Oral Anatomy
A-F only, 2 credit(s); prereq Accepted into dental therapy masters program;
Instructor: Madden, Michael John
Description: Student may contact the instructor or department for information.

DT 5431 Oral Anatomy Laboratory
A-F only, 2 credit(s); prereq Accepted into masters in dental therapy program;
Instructor: Madden, Michael John
Description: Student may contact the instructor or department for information.

DT 5521 Foundations of Interprofessional Professionalism, Communication, and Collaboration
S-N only, 1 credit(s);
Instructor: Blue, Christine M
Description: Student may contact the instructor or department for information.
S-N only, 0 credit(s), max credits 1, 1 completion allowed;
Instructor: Nakagaki,Kevin Neil
Description: Student may contact the instructor or department for information.

DENT 6470 Health Ecology Elective
1-10 credit(s), max credits 10, 1 completion allowed;
Instructor: Born,David Omar
Description: Student may contact the instructor or department for information.

DENT 6480 Advanced General Dentistry Elective
1-10 credit(s), max credits 10, 1 completion allowed;
Instructor: Born,David Omar
Description: Student may contact the instructor or department for information.

DENT 6490 Health Ecology: Independent Study
1-10 credit(s), max credits 10, 1 completion allowed;
Instructor: Born,David Omar
Description: Student may contact the instructor or department for information.

DENT 6624 Periodontology Clinic
A-F only, 2 credit(s); prereq Carranza Jr., F.A. and Newman, M.G.: Clinical Periodontology, 8th edition, W.B. Saunders Co., 1996.;
Instructor: Carlson,Jeffrey F
Description: Student may contact the instructor or department for information.

DENT 6715 Advanced Endodontic Elective
S-N only, 0 credit(s);
Instructor: Baisden,Michael Kenneth
Description: Student may contact the instructor or department for information.

DENT 6811 Operative Dentistry Clinic I
A-F only, 4 credit(s); prereq Operative Dentistry I, II, III, Operative Dentistry I and II Lab;
Instructor: Ziegler,Edgar F
Description: Student may contact the instructor or department for information.

DENT 6814 Operative Dentistry Clinic IV
A-F only, 4 credit(s); prereq Operative Dentistry I, II, III, Operative Dentistry I and II Lab;
Instructor: Ziegler,Edgar F
Description: Student may contact the instructor or department for information.

DENT 6840 Introduction to CAD/CAM CEREC Restorations
S-N only, 2 credit(s);
Instructor: Zidan,Omar
Description: Student may contact the instructor or department for information.

DENT 6912 Fixed Prosthodontics Clinic I
A-F only, 5 credit(s); prereq The first course of a 2 semester sequence course;
Instructor: Cook,Gary Eugene
Description: Student may contact the instructor or department for information.

DENT 6914 Fixed Prosthodontics Clinic III
A-F only, 5 credit(s); prereq 4810, 4811;
Instructor: Cook,Gary Eugene
Description: Student may contact the instructor or department for information.

DENT 6921 Removable Prosthodontics Clinic I
A-F only, 5 credit(s);
Instructor: Cook,Gary Eugene
Description: Student may contact the instructor or department for information.

DENT 6923 Removable Prosthodontics Clinic III
A-F only, 3 credit(s); prereq 4962, 4963;
Instructor: Cook,Gary Eugene
Description: Student may contact the instructor or department for information.

DENT 7000 Dental Clinic
1-6 credit(s), max credits 6, 1 completion allowed;
Instructor: Olin,Paul S
Description: Student may contact the instructor or department for information.

DENT 7031 Advanced Seminar in Clinical Geriatric Dentistry
S-N only, 1-2 credit(s); prereq [Advanced or grad] student in [dentistry or other AHC discipline];
Instructor: Shuman,Stephen K
Description: Student may contact the instructor or department for information.

DENT 7032 Field Experience: Administration in a Multidisciplinary Health Center
1-3 credit(s), max credits 3, 1 completion allowed;
Instructor: Shuman,Stephen K
Description: Student may contact the instructor or department for information.

DENT 7051 Advanced Study in the Theory and Principles of Oral Medicine
A-F only, 2 credit(s);
Instructor: Rhodus,Nelson L
Description: Student may contact the instructor or department for information.

DENT 7061 Special Oral Pathology I
A-F only, 0 credit(s); prereq Resident [or grad student] in discipline other than oral pathology;
Instructor: Koutlas,Ioannis George
Description: Student may contact the instructor or department for information.

DENT 7102 Conscious Sedation
A-F only, 2 credit(s); prereq Dentistry grad student;
Instructor: Hinrichs DDS,MS,James Edward
Description: Student may contact the instructor or department for information.

DENT 7111 Current Literature Review in Dentistry
S-N only, 2 credit(s); prereq Grad student in [dentistry or oral biology] or instr consent ;
Instructor: Holtan,James R
Description: Student may contact the instructor or department for information.

DENT 7112 Treatment Planning Seminar
A-F only, 2 credit(s), max credits 4;
Instructor: Holtan,James R
Description: Student may contact the instructor or department for information.

DENT 7991 Independent Study
OPT No Aud, 1-4 credit(s), max credits 8; prereq Enrolled in an advanced dental education program;
Instructor: Shuman,Stephen K
Description: Student may contact the instructor or department for information.

DENT 8090 Evidence-based Clinical Pediatric Dentistry
A-F only, 2 credit(s);
Instructor: Grothe,Ronald
Description: Student may contact the instructor or department for information.

DENT 8100 Topics in Advanced Periodontology: Literature Review
2 credit(s);
DES 1101V Honors: Introduction to Design Thinking
A-F only, 4 credit(s); prereq credit will not be granted if credit already received for: DHA 1101V Honors student; Meets CLE req of Arts/Humanities; meets CLE req of Writing Intensive;
Instructor: Hemmis, Patricia
Description: DHA 1101v-Introduction to Design Thinking Honors is an introduction to the theories and processes that underpin design thinking and practice. In this Honors course, students will investigate the interactions between humans and their natural, social, and designed environments where purposeful design helps determine the quality of those interactions. Students will be introduced to many facets of the design profession and will gain an interdisciplinary perspective about design and human behavior. This course offers students the opportunity to raise their awareness about the value, power, practice, and responsibility of design in our culture. Audience: This course is intended for undergraduate Honors students with an interest in pursuing design and design-related areas as professions: through clothing design, architecture, interior design, graphic design, housing studies, product design, landscape architecture, urban design and planning, and retail merchandising. This course is also a primary core requirement in the U of M undergraduate design minor. Secondary audiences might be any students who are interested in diverse types of thinking or design processes. Rationale: This course creates an opportunity for all design and design-related students to be in the same classroom, learning from faculty and practitioners of different design specializations, and learning from one another. This setting exposes students to all facets of design and provides them an interdisciplinary perspective about design and human behavior. For non-design students, the course offers the opportunity to raise their awareness about the value and the power of design in our culture. Texts: A required packet of readings and supplemental notes will be available from Books Underground, the bookstore in the St. Paul Student Center. A limited number of packets are also available from the Coffman Union Bookstore.
Style: 50% Lecture, 10% Film/Video, 25% Small Group Activities, 15% Guest Speakers. Students complete and present to hands-on group projects on design topics. Students work on projects in class, although outside time is also necessary.
Grading: 30% reports/papers, 30% special projects, 35% quizzes, 5% reflection paper.
Exam Format: Exams are composed of short answer, essay, and fill in the blank. Exams require students to identify and apply course concepts.

DES 1111 Creative Problem Solving
A-F only, 3 credit(s); prereq credit will not be granted if credit already received for: DHA 1111; Instructor: Hokanson, Joel
Description: How we generate new ideas is a critical skill in any field. It is a skill that can be employed on a small project or on a large project, but it must be developed and practiced. All of us can improve our capability for creative output and innovation. This course presents classic and new techniques through student activities, research, papers, projects, and exams. The use and mastery of creativity is the goal for this class and this semester. Assignments, lectures, discussions, and projects all will focus on this development of creative skills. This is the course that is the center of student activities at the University; it is the one course that deals most directly with creativity and creation. It is not directly about artistic creation; creativity is needed in all fields including business, engineering, medicine, and sociology. The nature of a student's university experience, particularly as a first year student, is a unique and different cognitive experience. Students must learn to think logically, utilize their critical thinking skills, explore ideas and to combine, integrate, and re-invent the way they think. No longer is a paper limited to a reiteration of the same information. Independent thought is now required of the successful student and professional; new ideas must be developed. Too often our educational system insists on the development of one single answer. At the University, we select our students on the basis of their ability to play by the rules of high school and standardized tests. Students, however, need the ability to go beyond linear, expected thinking and to be creative. Creativity is a skill that can be taught. It requires extensive work by the learners, but the lessons, while not conveying traditional content, will advance the
DES 1111H Honors: Creative Problem Solving
A-F only, 3 credit(s); prereq Honors credit will not be granted if credit already received for: DHA 1111H;
Instructor: Hokanson, Brad
Description: How we generate new ideas is a critical skill in any field. It is a skill that can be employed on a small project or on a large project, but it must be developed and practiced. All of us can improve our capability for creative output and innovation. This course presents classic and new techniques through student activities, research, papers, projects, and exams. The use and mastery of creativity is the goal for this class and this semester. Assignments, lectures, discussions, and projects all will focus on this development of creative skills. This is the course that is the center of student activities at the University; it is the one course that deals most directly with creativity and creation. It is not directly about artistic creation; creativity is needed in all fields including business, engineering, medicine, and sociology. The nature of a student’s university experience, particularly as a first year student, is a unique and different cognitive experience. Students must learn to think logically, utilize their critical thinking skills, explore ideas and to combine, integrate, and re-invent the way they think. No longer is a paper limited to a reiteration of the same information. Independent thought is now required of the successful student and professional; new ideas must be developed. Too often our educational system insists on the development of one single answer. At the University, we select our students on the basis of their ability to play by the rules of high school and standardized test. Students in this class, need the ability to go beyond linear, expected thinking and to be creative. Creativity is a skill that can be taught. It requires extensive work by the learners, but the lessons, while not conveying traditional content, will advance the learner in many ways. The principal activity of the course is the completion of a series of “differents”. Starting from your own level of creativity, these exercises will challenge you to push your own limits. <br>
website: http://www1.umn.edu/urelate/newsservice/Multimedia_Videos/creative_problem_solving.mp3&autoplay=0

DES 1120 Discovering Majors and Careers
A-F only, 1 credit(s);
Instructor: Hruska, Elizabeth Suzanne
Description: Are you anxious or stressed about making career decisions or settling in on an appropriate major? Would you like to investigate career and major options in more detail and how they relate to your personality, strengths, values and skills? Discovering Majors and Careers is a course that can help you learn more about your values, interests, strengths and personality. It will help you learn about how you can use your major to class, career you’ll enjoy. We’ll also introduce you to many of the resources available on campus, and help you explore the ways internships, community service, work experience, and travel can impact your future success. The goal of the class is to help you be proactive about the future and learn strategies that will help you find a career you’ll enjoy.

DES 1910W Freshman Seminar
A-F only, 2-3 credit(s), max credits 6; prereq Fr; Meets CLE req of Writing Intensive;
Instructor: Boyd Brent, James W
Description: Student may contact the instructor or department for information.

DES 3201 Strategic Career Planning for Design
A-F only, 1 credit(s); prereq soph, jr, sr, [Graphic design or interior design or clothing design or environmental design or architecture] major;
Instructor: Perman, Heidi J
Description: This course is meant to teach you the skills necessary to land a great job or internship in the field of design! By the end of this class, you will feel more confident about the steps necessary to obtain a good position. Through in-class activities and homework assignments, you will learn how to create a strong resume, how to market your skills to employers and how to find job openings for your field. The skills you learn in this class will help you throughout your future career!
Instructor: Schulte, Marcy  
**Course Guide at http://onestop.umn.edu.** IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.

DES 5168 Human Factors in Design  
A-F only, 3 credits(s); prereq Grad student or sr or instr consent  
credit will not be granted if credit already received for: DHA 5185;  
Instructor: Dunne, Lucy Elizabeth  
**Description:** Human Factors in Design is an introductory course in which we explore the various facets of human factors through the lens of design. We begin with the physical body (anthropometrics, physical ergonomics, sensory experiences), and move through cognition (attention, decision-making, HCI) to emotion (social issues, user experience.) This course assumes no prior exposure to human factors engineering or design: we apply theories and methods of assessing and addressing human factors through a product analysis project and a user-centered product design project. Typically the class is made up of students drawing from a wide variety of disciplines and experiences. **NEW THIS YEAR** Through a sponsorship by Nokia, we will be focusing on mobile phones in the course product design project (*widely* interpreted). Each student will receive a Nokia N8 smart phone to work with for the duration of the semester.  
**Style:** 50% Lecture, 10% Film/Video, 10% Discussion, 15% Guest Speakers.

DES 8167 Aesthetics of Design  
A-F only, 3 credit(s); prereq credit will not be granted if credit already received for: DHA 8167;  
Instructor: DeLong, Marilyn R  
**Description:** Student may contact the instructor or department for information.

### Development Studies and Social Change  
**537 Heller Hall**

DSSC 8111 Approaches to Knowledge and Truth: Ways of Knowing in Development Studies and Social Change  
S-N only, 2 credit(s); prereq Grad DSSC minor or instr consent;  
Instructor: Duvall, Raymond D  
**Description:** Student may contact the instructor or department for information.

DSSC 8211 Doctoral Research Workshop in Development Studies and Social Change  
S-N only, 2 credit(s); prereq Grad DSSC minor or instr consent;  
Instructor: Brown, Karen  
**Description:** Student may contact the instructor or department for information.

DSSC 8310 Topics in Development Studies and Social Change  
S-N only, 1 credit(s), max credits 3, 3 completions allowed; prereq Grad DSSC minor or instr consent;  
Instructor: Leitner, Helga  
**Description:** Student may contact the instructor or department for information.

DSSC 8310 Topics in Development Studies and Social Change  
S-N only, 1 credit(s), max credits 3, 3 completions allowed; prereq Grad DSSC minor or instr consent;  
Instructor: Vavrus, Frances  
**Description:** Student may contact the instructor or department for information.
DDS 6112 Periodontology II: Technique  
A-F only, 2.2 credit(s); prereq In DDS program;  
Instructor: Danielson, Judy Ann  
Description: Periodontology Technique is designed to introduce second year dental students to the fundamentals of periodontal instrumentation and techniques. This course utilizes periodontal instrumentation and techniques. The student will be able to evaluate and treat periodontal disease.

DDS 6141 Pediatric Dentistry Clinic  
A-F only, 3.6 credit(s); prereq 3rd yr DDS student;  
Instructor: Yesil, Jasmine  
Description: Students may contact the instructor or department for information.

DDS 6152 Oral and Maxillofacial Surgery I  
A-F only, 1.1 credit(s);  
Instructor: Hughes, Pamela Jean  
Description: This course is an introductory level didactic presentation of the fundamental concepts of oral and maxillofacial surgery. Emphasis is placed on the fundamental skills of oral surgery which apply to the practice of general dentistry.

DDS 6171 Orthodontics I  
A-F only, 2.7 credit(s);  
Instructor: De Felippe, Nanci Lara  
Description: Students may contact the instructor or department for information.

DDS 6213 Microbiology for Dental Students  
A-F only, 4.7 credit(s); prereq In DDS program;  
Instructor: Jardine, Paul James  
Description: Students may contact the instructor or department for information.

DDS 6214 General Histology  
A-F only, 4 credit(s); prereq Accepted into DDS program;  
Instructor: Buchanan, Judith A  
Description: The purpose of this course is to provide an introduction to the structure and function of cells, tissues, organs and organ systems. The course begins with an introduction to cells and tissues. The unique arrangement of basic tissues to form organs and organ systems is then discussed. The course ends with discussion of general concepts of human embryologic development and embryologic development of head and neck structures. The intent is for students to have a clear mental image of the human body at the microscopic level at the successful completion of the course.

DDS 6221 Radiographic Interpretation  
A-F only, 2 credit(s); prereq In DDS program;  
Instructor: Ahmad, Mansur  
Description: Students may contact the instructor or department for information.

DDS 6234 Oral Radiology Clinic  
S-N only, 0.5 credit(s); prereq 3rd yr DDS student;  
Instructor: Ahmad, Mansur  
Description: Students may contact the instructor or department for information.

DDS 6271 TMD & Orofacial Pain  
A-F only, 0.8 credit(s);  
Instructor: Nixdorf, Donald R  
Description: Students may contact the instructor or department for information.

DDS 6331 Dental Care Delivery and Oral Epidemiology  
A-F only, 1.9 credit(s); prereq 1st yr in DDS Program;  
Instructor: Born, David Omar  
Description: The course presents the dentist as engaged with multiple communities, as a professionally responsible and ethical individual. Students emerge from the course understanding the public health approach to disease and the tools used to address the public's oral health needs. In addition, students will have an understanding of the ways in which oral health care is delivered in the U.S. and of the factors impacting the supply and demand for dental services. The course director encourages students to develop analytical skills and to think critically about the delivery of dental care.

DDS 6337 Current Legal Issues for the New Dentist  
S-N only, 2.1 credit(s); prereq In DDS program;  
Instructor: Ryan, Mary Lynn L  
Description: Students may contact the instructor or department for information.

DDS 6361 Senior Outreach Experience  
S-N only, 6.4 credit(s); prereq 4th yr student in Dentistry Program;  
Instructor: Schulz DDS, Paul D  
Description: This outreach course is designed to involve students in a variety of clinical settings throughout Minnesota, exposing them to patient populations of diverse age, ethnicity and need. Included in this course is a strong commitment to initiate student involvement in community health education and promotion services. Students will also provide dental care to underserved populations while being supervised by adjunct faculty from the University of Minnesota School of Dentistry.

Style: 5% Web Based. 95% addressing patient-based dental care skills. Students must complete course evaluation to receive a grade.

DDS 6411 Applied Dental Biomaterials  
A-F only, 2 credit(s); prereq In DDS program;  
Instructor: Combe, Edward Charles  
Description: Students may contact the instructor or department for information.

DDS 6431 Oral Anatomy I  
A-F only, 2 credit(s); prereq 1st yr DDS student;  
Instructor: Madden, Michael John  
Description: This course in oral anatomy is part of the pre-clinical curriculum and is designed to introduce the basic morphological characteristics of the human dentition and associated continuous structures. The format includes lectures and laboratory. The laboratory is designed to assist in the development of your manual dexterity skills and at the same time facilitate the learning of dental anatomy of the human dentition.

The aim of this course is to provide foundational knowledge that could be applied to most, if not all situations they may encounter in general clinical practice.

DDS 6432 Oral Anatomy Laboratory I  
A-F only, 2.9 credit(s); prereq 1st yr DDS student;  
Instructor: Madden, Michael John  

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
DDS 6433 Introduction to Psychomotor Skill Development I and II
S-N only, 0.7 credit(s), max credits 1.4; prereq 1st yr DDS student;
Instructor: Phair, Craig B
Description: The purpose of this course is to develop specific psychomotor skills through the use of virtual reality training that will better prepare dental students for the further development of their skills in the Prosthodontics and Operative courses. Psychomotor skills, mirror skills and proper ergonomics through the preparation of intra-coralon cavity preparations will be the emphasis of this course. Objective feedback utilized by the "Dent Sim" technology will provide the student instantaneous evaluation of their progress.

DDS 6437 Operative Dentistry II Lab
A-F only, 2.9 credit(s); prereq in DDS program;
Instructor: Phair, Craig B
Description: Student may contact the instructor or department for information.

DDS 6439 Operative Dentistry IV
A-F only, 1.4 credit(s); prereq 3rd yr DDS student;
Instructor: Zidan, Omar
Description: Student may contact the instructor or department for information.

DDS 6475 Preclinical Prosthodontics Techniques Lecture IV
A-F only, 1.8 credit(s); prereq DDS program;
Instructor: Conrad, Heather Joan
Description: Student may contact the instructor or department for information.

DDS 6476 Preclinical Prosthodontics Technique Laboratory IV, Complete Dentures
A-F only, 2.8 credit(s); prereq DDS program;
Instructor: Conrad, Heather Joan
Description: Student may contact the instructor or department for information.

DDS 6511 Foundations of Interprofessionalism, Communication, and Collaboration
S-N only, 1 credit(s);
Instructor: Blue, Christine M
Description: Student may contact the instructor or department for information.

DDS 6611 Elective Short Term Externship IV
S-N only, 1-5 credit(s), max credits 25, 5 completions allowed; prereq DDS Program;
Instructor: Berthold, Peter
Description: Student may contact the instructor or department for information.

DDS 6613 Endodontic Topics for the General Dentist
S-N only, 0 credit(s);
Instructor: Baisden, Michael Kenneth
Description: Student may contact the instructor or department for information.

DDS 6615 Oral and Maxillofacial Pathology Independent Study
S-N only, 1 credit(s), max credits 2;
Instructor: Rohrer, Michael D
Description: Student may contact the instructor or department for information.

DDS 6621 Introduction to CAD/CAM Restorations
S-N only, 2 credit(s);
Instructor: Zidan, Omar
Description: Student may contact the instructor or department for information.

DDS 6911 Essentials of Clinical Care: D3
S-N only, 4-18 credit(s), max credits 54, 3 completions allowed; prereq DDS 3rd yr;
Instructor: Buchanan, Judith A
Description: Student may contact the instructor or department for information.

DDS 6918 Evidence Based Dentistry
A-F only, 1 credit(s); prereq Must be in DDS program;
Instructor: Anderson, Gary C
Description: Student may contact the instructor or department for information.

DDS 6921 Essentials of Clinical Care: D4
S-N only, 6-18 credit(s), max credits 54, 3 completions allowed; prereq DDS 4th yr;
Instructor: Buchanan, Judith A
Description: Student may contact the instructor or department for information.

Dutch

DTCH 1001 Beginning Dutch
5 credit(s); Credit will not be granted if credit has been received for: DTCH 4001;
Instructor: Oosterhoff, Jenneke A
Description: Hallo, mijn naam is Jan. Ik kom uit Nederland. Ik woon in Minneapolis. Ik studeer economie. Wow, isn't it amazing how similar Dutch is to English? And yet the culture is refreshingly different, in many ways. Come join us for Dutch 1001, the first course in the first-year language instruction sequence (1001-2), designed to develop a basic communicative proficiency in Dutch. You will practice the four language skills (speaking, writing, reading, and listening) and learn to handle simple, everyday transactions. The main books are the text book and exercise book of "Code," volume 1. The book is accompanied by audio and visual material which the instructor will use in class and you are expected to use at home. Class time will be devoted to mostly speaking and listening skills. Supplementary materials about life and culture in Holland (short authentic and literary texts, songs, video, pictures) will be an integral part of the course. The first-year courses encourage extensive student interaction, partner activities, and group work. A selection of topics to be introduced includes: shopping, going out, giving directions, looking for housing, traveling, etc. You should expect an average of 2 hours of outside preparation for each class session. See the description for DTCH 4001 for an option for qualified students to register for this course for 2 credits (and lower tuition) instead of 4 credits.
Style: 20% Lecture, 20% Discussion, 10% Laboratory, 40% Other
Grading: 10% mid exam, 10% final exam, 40% quizzes, 10% written homework, 20% in-class presentation, 10% other evaluation.
Exam Format: quizzes, tests

DTCH 1003 Intermediate Dutch
5 credit(s); prereq 1002; Credit will not be granted if credit has been received for: DTCH 4003;
Instructor: Oosterhoff, Jenneke A
Description: Hallo, leuk je weer te zien! Ik ben blij dat je weer met Nederlands meedoet. This course continues the presentation of language skills (speaking, writing, listening and reading) begun in Dutch 1001-2, with special focus on the extension of speaking and writing skills. The main books are the text book and DVD of "Nederlands in Actie". This book is accompanied by audio and video materials which the instructor will use in class and you are expected to use at home. Class time will be devoted mostly to speaking and pre-writing activities. You will write 6 formal essays, each of which will be followed by a rewrite. In addition, you will read two Dutch novels, followed by film viewings. The course includes a variety of supplementary materials on Dutch life and culture: video sections from Dutch TV, information from Dutch websites, Dutch film, etc. You should
expect an average of three hours of outside preparation per class session. See the description for Dtch 4003 for an option for qualified students to register for this course for 2 credits instead of 4 credits.

**Style:** 20% Lecture, 10% Film/Video, 40% Discussion, 30% Small Group Activities. pre-writing and interactive exercises

**Grading:** 10% mid exam, 10% final exam, 30% reports/papers, 30% quizzes, 20% class participation.

**Exam Format:** quizzes, tests, essays

**DTCH 3011 Conversation and Composition**

3 credit(s); prereq 1004 or 4004 or instr consent; 

**Instructor:** Oosterhoff,Jenneke A

**Description:** Class Description: In an interview Renate Dorrestein, writer of one of the texts for these courses, says: ?We need stories in order to understand ourselves and the world around us, and to understand how difficult it is to be a human being. And how difficult it is to continue to be a decent human being when circumstances turn very indecent.? The topic of this course is the family, or more precisely how unfortunate circumstances can destroy family relationships. We will explore and discuss how the end of pillarization, the sexual revolution, the loosening of religious ties and the influence of foreign cultures through immigration in Dutch society have changed the modern family in the Netherlands. Students will read six novels in Dutch, discuss these novels in class (in Dutch), and write an essay (in Dutch) on each novel. Selected Dutch movies in the context of the course topic will be screened as well.

**Style:** 10% Lecture, 10% Film/Video, 50% Discussion, 30% Small Group Activities.

**Grading:** 30% reports/papers, 20% journal, 20% in-class presentation, 30% class participation. reading journals and other informal writing assignments of varying lengths

**Exam Format:** essays

**DTCH 3310 Studies in Dutch Literature: The Netherlands in World War II**

3 credit(s), max credits 9, 3 completions allowed; prereq knowledge of Dutch; 

**Instructor:** Oosterhoff,Jenneke A

**Description:** Class Description: In an interview Renate Dorrestein, writer of one of the texts for this course, says: ?We need stories in order to understand ourselves and the world around us, and to understand how difficult it is to be a human being. And how difficult it is to continue to be a decent human being when circumstances turn very indecent.? The topic of this course is the family, or more precisely how unfortunate circumstances can destroy family relationships. We will explore and discuss how the end of pillarization, the sexual revolution, the loosening of religious ties and the influence of foreign cultures through immigration in Dutch society have changed the modern family in the Netherlands. Students will read six novels in Dutch, discuss these novels in class (in Dutch), and write an essay (in Dutch) on each novel. Selected Dutch movies in the context of the course topic will be screened as well.

**Style:** 10% Lecture, 10% Film/Video, 50% Discussion, 30% Small Group Activities. 

**Grading:** 30% reports/papers, 20% journal, 20% in-class presentation, 30% class participation. reading journals and other informal writing assignments of varying lengths

**Exam Format:** essays

**DTCH 3993 Directed Studies**

1-5 credit(s), max credits 12, 12 completions allowed; prereq instr consent, dept consent, college consent; 

**Instructor:** STAFF

**Description:** Guided individual reading or study. The student approaches an appropriate professor with a topic of interest, and if the professor has time and is willing to guide the student, the student, along with the professor, fills out a form which is available in the department office (205 Folwell). On this form, they specify the topic, reading and study materials, and form of evaluation.

**DTCH 4001 Beginning Dutch**

2 credit(s); prereq 1004 in another language or passing

score on LPE or grad student; Credit will not be granted if credit has been received for: DTCH 1001; 

**Instructor:** Oosterhoff,Jenneke A

**Description:** Hallo, mijn naam is Jan. Ik kom uit Nederland. Ik woon in Minneapolis. Ik studeer economie. Wow, isn't it amazing how similar Dutch is to English? And yet the culture is refreshingly different, in many ways. Come join us for Dutch 1001, the first course in the first-year language instruction sequence (1001-2), designed to develop a basic communicative proficiency in Dutch. You will practice the four language skills (speaking, writing, reading, and listening) and learn to handle simple, everyday transactions. The main books are the text book and exercise book of "Code," volume 1. The book is accompanied by audio and visual material which the instructor will use in class and you are expected to use at home. Class time will be devoted to mostly speaking and listening skills. Supplementary materials about life and culture in Holland (short authentic and literary texts, songs, video, pictures) will be an integral part of the course. The first-year courses encourage extensive student interaction, partner activities, and group work. A selection of topics to be introduced includes: shopping, going out, giving directions, looking for housing, traveling, etc. You should expect an average of 2 hours of outside preparation for each class session. See the description for Dtch 4001 for an option for qualified students to register for this course for 2 credits (and lower tuition) instead of 4 credits.

**Style:** 20% Lecture, 20% Discussion, 10% Laboratory, 40% Small Group Activities, 10% Web Based. interactive exercises (including lab).

**Grading:** 10% mid exam, 10% final exam, 40% quizzes, 10% written homework, 20% in-class presentation, 10% other evaluation. written homework

**Exam Format:** quizzes, tests

**DTCH 4003 Intermediate Dutch**

2 credit(s); prereq 1004 in another language or passing score on LPE or grad student; Credit will not be granted if credit has been received for: DTCH 1003; 

**Instructor:** Oosterhoff,Jenneke A

**Description:** Hallo, leuk je weer te zien! Ik ben blij dat je weer met Nederlands meedoet. This course continues the presentation of language skills (speaking, writing, listening and reading) begun in Dutch 1001-2, with special focus on the extension of speaking and writing skills. The main books are the text book and DVD of "Nederlands in Actie". This book is accompanied by audio and video materials which the instructor will use in class and you are expected to use at home. Class time will be devoted to mostly speaking and pre-writing activities. You will write 6 formal essays, each of which will be followed by a rewrite. In addition, you will read two Dutch novels, followed by film viewings. The course includes a variety of supplementary materials about life and culture in Holland: video sections from Dutch TV, information from Dutch websites, Dutch film, etc. You should expect an average of three hours of outside preparation per class session. See the description for Dtch 4003 for an option for qualified students to register for this course for 2 credits instead of 4 credits.

**Style:** 20% Lecture, 10% Film/Video, 40% Discussion, 30% Small Group Activities. pre-writing and interactive exercises

**Grading:** 10% mid exam, 10% final exam, 30% reports/papers, 30% quizzes, 20% class participation.

**Exam Format:** quizzes, tests, essays

**DTCH 5993 Directed Studies**

1-4 credit(s), max credits 12, 12 completions allowed; prereq instr consent, dept consent, college consent; 

**Instructor:** STAFF

**Description:** Guided individual reading or study. The student approaches an appropriate professor with a topic of interest, and if the professor has time and is willing to guide the student, the student, along with the professor, fills out a form which is available in the department office (205 Folwell). On this form, they specify the topic, reading and study materials, and form of evaluation.
East Asian Studies
214 Social Sciences Tower

EAS 3461 Introduction to East Asia I: The Imperial Age
3-4 credit(s), max credits 4, 1 completion allowed; Credit will not be granted if credit has been received for: HIST 3461;
Instructor: Wang,Liping
Description: This is a comprehensive introduction to East Asia (China, Japan, Korea, and Vietnam) from prehistoric times to the sixteenth century. It traces the evolution of major political and economic institutions as ways to understand basic structures of political authority and systems of resource distribution in these societies. It outlines major schools of East Asian philosophy and religions, such as Confucianism, Daoism, and Buddhism, and discusses their development and influence in each of the four countries. It analyzes some of the most important features of East Asian society, i.e., family structure and gender relationships in ideology as well as in practice. As part of the overview of East Asian society and culture, the course also introduces main modes of artistic expression through various kinds of visual materials as well as visit to museum. The course stresses the inter-connections within East Asia while highlighting the distinctive paths of historical changes in each of the four countries.
Style: 80% Lecture, 20% Discussion.

EAS 3468 Social Change in Modern China
3 credit(s); Credit will not be granted if credit has been received for: HIST 3468;
Instructor: Wang,Liping
Description: This course explores major issues in modern Chinese society. It begins with the Opium War in 1840 and traces the relationship between anti-drug effort and state building to the 1990s. It examines the New Culture Movement in the 1920s and links it to the emergence of cosmopolitan culture, new women, and popular nationalism. It retells the story of the Great Leap Forward in the 1950s and uses it to analyze the increasing urban/rural gaps under the PRC. It also devotes considerable time to the importance of gender and ethnicity since the early 20th century. Students will achieve a good understanding of modern China through reading and discussing up-to-date scholarship on these above themes and issues. This course is for undergraduate students, both majors and non-majors.
Grading: 80% reports/papers, 20% class participation.
Style: 60% Lecture, 40% Discussion.

EAS 3471 Modern Japan, Meiji to the Present (1868-2000)
3 credit(s); Credit will not be granted if credit has been received for: HIST 3471; Meets CLE req of Historical Perspectives;
Instructor: Mizuno,Hiromi
Description: From the land of samurai to the only non-Western colonial power, from the severely destructed nation of WWII "war criminals" to the postwar miracle, Japan went through immense changes from the mid-19th to the 21st century. How did the Japanese leaders and people make these changes and why? How have the Japanese themselves understood their changing nation and relationship to the world? How can we make sense of Japan's complicated past that made the nation the “Japan” we know today? This course explores the intellectual, cultural, and political aspects of Japan's modernization, the Pacific War, and postwar development, using visual images from museums, cartoons, advertisement, and films as well as fictional and non-fictional writings. The course is based on lecture but also integrates various kinds of assignments that stimulate discussion.
Style: 90% Lecture, film viewing
Grading: 70% reports/papers, 10% quizzes, 20% other evaluation. attendance
Exam Format: essay
ECOLOGY, EVOLUTION, AND BEHAVIOR
100 Ecology Building

EEB 3001 Ecology and Society
A-F only, 3 credit(s); prerequisite [jr or sr] recommended; biological sciences students may not apply or toward major;
Credit will not be granted if credit has been received for:
BIOL 3407; Meets CLE req of Environment;
Instructor: Powers, Jennifer Sarah
Description: This course introduces basic concepts in ecology for non-majors, with an emphasis on the application of ecological principles to questions facing society. The three main themes of the course are: 1) natural history and environmental controls on individuals and ecosystems; 2) populations and communities, and 3) ecosystems, landscapes, and global ecology.
Style: 60% Lecture, 35% Discussion, 5% Student Presentation.
Grading: 80% mid exam, 10% reports/papers, 10% written homework, 5% in-class presentation.
Exam Format: Short-answer, short-essay and graphical interpretation questions.

EEB 4129 Mammalogy
A-F only, 4 credit(s); prerequisite BIOL 1001 or BIOL 2012; Credit will not be granted if credit has been received for:
FW 4129;
Instructor: Jansa, Sharon A
Description: A course in mammalian biology, including topics in anatomy, evolution, biogeography, behavior, and ecology. Lab emphasizes identification, distribution, and natural history of mammals, with a focus on North American species. Course is targeted towards upperclass undergraduate biology majors and first or second year graduate students. BIOL 1001 or 1009 is a required prerequisite; BIOL 2012 is recommended.
Style: 60% Lecture, 10% Discussion, 30% Laboratory.
Grading: 30% mid exam, 25% final exam, 15% reports/papers, 30% laboratory evaluation.
Exam Format: Short answer, fill-in-the-blank, and essay.

EEB 4609W Ecosystem Ecology
3 credit(s); prerequisite BIOL 3407 or BIOL 5407; Meets CLE req of Writing Intensive;
Instructor: Hobbie, Sarah E
Description: Regulation of energy and elements cycling through ecosystems; dependence of the cycles on kinds and numbers of species within ecosystems; effects of human-induced global changes on the functioning of ecosystems The course is roughly divided into halves. The first half will provide some background on the history of ecosystem ecology and on climate and soils, but will focus primarily on element cycling, particularly carbon and nutrient cycles. We will examine the energy base of ecosystems?what controls carbon fixation by plants and what is the fate of that fixed carbon. We will also study nutrient inputs to, cycling through, and losses from ecosystems. The second half will focus on interactions and perturbations, including those resulting from human-induced global changes. We will examine transfers of energy from primary producers to higher trophic levels and how herbivory and disturbances such as fire affect primary production and nutrient cycling. We will examine how elevated CO2, changing climate, increased atmospheric nitrogen deposition, biological invasions, and losses of biodiversity alter ecosystem processes. We will also discuss human dependence on ecosystems.
Style: 66% Lecture, 33% Discussion.
Grading: 35% mid exam, 40% final exam, 20% reports/papers, 5% class participation.
Exam Format: Short-answer and essay

EEB 5322 Evolution and Animal Cognition
3 credit(s); prerequisite BIOL 3411 or PSY 3061 or instr consent;
Instructor: Stephens, David William
Description: Animal cognitive abilities. Learning, perception, memory, navigation, and communication from evolutionary/comparative perspective. Cognitive abilities as adaptations that solve specific environmental problems.

EEB 5601 Limnology
3 credit(s); prerequisite Grad student or instr consent;
Instructor: Finlay, Jacques C
Description: Student may contact the instructor or department for information.

EEB 5605 Limnology Laboratory
A-F only, 2 credit(s); prerequisite 3603 or instr consent;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

EEB 5609 Ecosystem Ecology
3 credit(s); prerequisite [BIOL 3407 or BIOL 5407] or instr consent;
Instructor: Hobbie, Sarah E
Description: Regulation of energy and elements cycling through ecosystems; dependence of the cycles on kinds and numbers of species within ecosystems; effects of human-induced global changes on the functioning of ecosystems The course is roughly divided into halves. The first half will provide some background on the history of ecosystem ecology and on climate and soils, but will focus primarily on element cycling, particularly carbon and nutrient cycles. We will examine the energy base of ecosystems?what controls carbon fixation by plants and what is the fate of that fixed carbon. We will also study nutrient inputs to, cycling through, and losses from ecosystems. The second half will focus on interactions and perturbations, including those resulting from human-induced global changes. We will examine transfers of energy from primary producers to higher trophic levels and how herbivory and disturbances such as fire affect primary production and nutrient cycling. We will examine how elevated CO2, changing climate, increased atmospheric nitrogen deposition, biological invasions, and losses of biodiversity alter ecosystem processes. We will also discuss human dependence on ecosystems.
Style: 66% Lecture, 33% Discussion.
Grading: 35% mid exam, 40% final exam, 20% reports/papers, 5% class participation.
Exam Format: Short-answer and essay

EEB 8601 Introduction to Stream Restoration
3 credit(s); prerequisite Grad student in [CE or GEO or EEB or WRS or FW or BAE or FR or HORT or ENR or LA or SRSE] or instr consent;
Credit will not be granted if credit has been received for: GEO 8601;
Instructor: Paola, Chris
Description: Student may contact the instructor or department for information.

EEB 8980 Seminar on Current Topics
S-N only, 1-3 credit(s), max credits 30, 10 completions allowed; prerequisite [1st yr or 3rd sem] grad student, instr consent;
Instructor: Sterner, Robert Warner
Description: Student may contact the instructor or department for information.

EEB 8980 Seminar on Current Topics
S-N only, 1-3 credit(s), max credits 30, 10 completions allowed; prerequisite [1st yr or 3rd sem] grad student, instr consent;
Instructor: Lanyon, Scott Merril
Description: Student may contact the instructor or department for information.

EEB 8980 Seminar on Current Topics
S-N only, 1-3 credit(s), max credits 30, 10 completions allowed; prerequisite [1st yr or 3rd sem] grad student, instr consent;
Instructor: Cof. Staff
Description: Student may contact the instructor or department for information.
Schedule.
Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class
This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online

University of Minnesota - Course Guide for Twin Cities Campus Fall 2011

EEB 8980 Seminar on Current Topics
S-N only, 1-3 credit(s), max credits 30, 10 completions allowed; prereq [1st yr or 3rd sem] grad student, instr
consent;
Instructor: May, Georgiana
Description: Student may contact the instructor or department for information.

EEB 8990 Graduate Seminar
1-3 credit(s), max credits 30, 10 completions allowed; prereq instr consent;
Instructor: Zink, Robert Martin
Description: Student may contact the instructor or department for information.

EEB 8990 Graduate Seminar
1-3 credit(s), max credits 30, 10 completions allowed; prereq instr consent;
Instructor: Alstad, Donald Norman
Description: Student may contact the instructor or department for information.

EEB 8990 Graduate Seminar
1-3 credit(s), max credits 30, 10 completions allowed; prereq instr consent;
Instructor: Tilman, David
Description: Student may contact the instructor or department for information.

EEB 8990 Graduate Seminar
1-3 credit(s), max credits 30, 10 completions allowed; prereq instr consent;
Instructor: Polasky, Stephen
Description: Student may contact the instructor or department for information.

EEB 8990 Graduate Seminar
1-3 credit(s), max credits 30, 10 completions allowed; prereq instr consent;
Instructor: Powers, Jennifer Sarah
Description: Student may contact the instructor or department for information.

EEB 8991 Independent Study: Ecology, Evolution, and Behavior
1-10 credit(s), max credits 10, 10 completions allowed; prereq instr consent;
Instructor: Zink, Robert Martin
Description: Student may contact the instructor or department for information.

EEB 8994 Directed Research
S-N only, 1-5 credit(s), max credits 10, 10 completions allowed; prereq instr consent;

Instructor: Jansa, Sharon A
Description: Student may contact the instructor or department for information.

Economics
4-101 Hanson Hall

ECON 1101 Principles of Microeconomics
4 credit(s); prereq knowledge of plane geometry and advanced algebra credit will not be granted if credit received for: 1104, 1111, ApEc 1101; Credit will not be granted if credit has been received for: APEC 1101; Meets CLE req of Global Perspectives; meets CLE req of Social Sciences;
Instructor: STAFF
Description: Econ 1101 satisfies the CLE requirements of the Social Science Core and of the Global Perspectives Theme. This is an introductory course in Economics. Topics covered include the behavior of consumers, firms, and markets in the domestic and world economy. Interdependencies in the global economy, and effects of global linkages on individual decisions.
Style: 75% Lecture, 25% Discussion.
Grading: All ECON 1101 students (in all sections) will take the midterm exams and final exam at the same time/day; there will be evening exams.
Exam Format: All ECON 1101 lectures (and accompanying recitation sections) will have two common midterm exams and one common final exam. These will be in the evening and will be announced on the course syllabi.

ECON 1101 Principles of Microeconomics
4 credit(s); prereq knowledge of plane geometry and advanced algebra credit will not be granted if credit received for: 1104, 1111, ApEc 1101; Credit will not be granted if credit has been received for: APEC 1101; Meets CLE req of Global Perspectives; meets CLE req of Social Sciences;
Instructor: Sager, Erick
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. This course examines the choices of individual consumers, firms, and markets. More specifically, you will explore a formal framework and analyze why people purchase certain goods, how firms choose a production strategy to maximize profit, and how changes in certain economic conditions and policies influence prices and quantities in markets.
Style: Online with handwritten assignments and exams
Grading: 20% mid exam, 30% final exam. - 2 computerized introductory assignments (5%) -5 computerized assignments (35%) - 2 written assignments
Exam Format: Supervised, in-person (not online) exams

ECON 1102 Principles of Macroeconomics
4 credit(s); prereq [1101 or equiv], knowledge of plane geometry and advanced algebra credit will not be granted if credit received for: 1105, 1112, ApEc 1102; Credit will not be granted if credit has been received for: APEC 1102;
Instructor: STAFF
Description: This is an introductory course in Economics, to be taken after completing Econ 1101. It includes the study of macroeconomic indicators; the role of money; role of fiscal and monetary policy; international trade; interdependencies among nations.
Style: 75% Lecture, 25% Discussion. discussion section

ECON 1102 Principles of Macroeconomics
4 credit(s); prereq [1101 or equiv], knowledge of plane geometry and advanced algebra credit will not be granted if credit received for: 1105, 1112, ApEc 1102; Credit will not be granted if credit has been received for: APEC 1102;
Instructor: Amin, Minesh Devendra
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education.
You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. This introductory course acquaints students with the basic tools in microeconomics, including opportunity cost, debt, inflation, unemployment, the role of central banks, saving and investment, budget and trade deficits/surpluses, GDP, exchange rates, and fiscal and monetary policies. Basic macroeconomic tools and concepts are essential in understanding the economic way of thinking in a world with country interdependencies, multinational firms, and an increasingly open global economy. The concepts offer important insights into a variety of social, economic, and country interactions.

**Style:** Online with handwritten exams

**Grading:** 15% mid exam, 25% final exam. 29 Aplia assignments

**ECON 1905 Freshman Seminar**

**A-F only, 3 credit(s); prereq freshman;**

**Instructor:** Sher, Itai

**Description:** "Strategic Thinking and Social Interaction" Game Theory is a field which studies strategic interaction. This may be important in any situation where a group of people interact and the decisions made by each person depend on the decisions made by others. Game Theory is relevant in many situations including nuclear deterrence and warfare, the theory of auctions, the analysis of different voting systems, political campaigns, competition among firms, and the formation of social networks. Game Theory is also a useful tool for studying concepts which are relevant to many social interactions such as reputation, threats, promises, cooperation, coordination, and incentives. This course will provide an informal introduction to the basic concepts of Game Theory, which does not require any mathematics. We will read and discuss articles about the many areas in which these notions apply.

**ECON 3101 Intermediate Microeconomics**

4 credit(s); prereq 1101, 1102 or equiv, Math 1271 or equiv; Credit will not be granted if credit has been received for:

- APEC 3001;
- Instructor: STAFF

**Description:** This is a required course for Economics majors, and is a prerequisite for most upper-division Economics courses. It essentially provides you with tools necessary to work with economic theory. Students should have completed Calculus I successfully PRIOR to taking this course. Students are NOT permitted to take Calc I concurrently. The course includes the study of consumer and producer behavior under competitive and monopolistic conditions; factors influencing production, price, and other decisions of the firm; applications of the theory.

**Style:** 100% Lecture.

**Exam Format:** problems, short essays

**ECON 3102 Intermediate Macroeconomics**

4 credit(s); prereq 3101 or equiv; Credit will not be granted if credit has been received for:

- APEC 3006;
- Instructor: STAFF

**Description:** This is one of the two basic tool courses for Economics majors. The prerequisite is Econ 3101, which students must have completed successfully PRIOR to taking this course. Students are NOT permitted to take both concurrently, or to take Econ 3102 prior to Econ 3101. The course includes determinants of national income, employment, and price level; effects of fiscal and monetary policies; with an emphasis on a general equilibrium approach. Economic growth is also discussed.

**Style:** 100% Lecture.

**Exam Format:** Problems and short essays

**ECON 3951 Major Project Seminar**

**A-F only, 2 credit(s); prereq [3101 or 3102 or equiv], fr writing requirement satisfied;**

**Instructor:** STAFF

**Description:** A senior project is a requirement for the BA and BA-Q degrees in Economics. Students work with the instructor to produce a significant piece of written work in Economics. Criteria for the paper: to demonstrate critical thinking in Economics; collection and analysis of data; economic analysis and effective interpretation of results. Should be modeled as an economics journal article. Check the Undergraduate Handbook (web version or hard copy) on the four ways to satisfy this requirement. Students will receive the syllabus via email.

**Style:** No formal meeting time. Please contact the instructor via email.

**Grading:** 100% reports/papers.

**ECON 3960 Topics in Economics**

3 credit(s), max credits 6; prereq 1101, 1102 or equiv;

**Instructor:** STAFF

**Description:** The Chinese Economy. The course includes the historical and economic development of China with emphasis on economic indicators. Role of China in the world economy today.

**Style:** 90% Lecture, 10% Discussion.

**Exam Format:** Essay and short problems

**ECON 4100W Undergraduate Writing in Economics**

A-F only, 1 credit(s), max credits 2; prereq 3101, [concurrent enrollment in 4831 or concurrent enrollment in economics honors course], instr consent; Meets CLE req of Writing Intensive;

**Instructor:** STAFF

**Description:** Students can sign up for this one-credit course if they are concurrently registered for an Economics Honors course or for Econ 4831. This will enable them to make the honors course writing intensive. Students receive the assignment from the instructor of the honors course. The Econ 4100W TA works with students to help them write the paper. Students turn in various drafts to the TA and receive feedback on every assignment. The final product is the completed paper.

**Grading:** 100% reports/papers.

**ECON 4109H Honors Course: Game Theory and Applications**

4 credit(s); prereq 3101, 3102 or equiv, Math 1271-1272 or equiv;

**Instructor:** STAFF

**Description:** This is recommended for Economics majors with a good mathematical background. Normal and extensive forms of Games and applications of games.

**Style:** 90% Lecture, 10% Discussion.

**ECON 4113 Introduction to Mathematical Economics**

4 credit(s); prereq 3101, 3102 or equiv, Math 1271-1272-2243 or equiv;

**Instructor:** STAFF

**Description:** The course includes the central mathematical techniques used in the mathematical approach to economic analysis. Includes optimization with constraints, emphasizing the approach derived from multivariate calculus.

**Style:** 95% Lecture, 5% Discussion.

**ECON 4161 Microeconomic Analysis**

2 credit(s); prereq [3101 or 5151 or equiv], Math 2243, Math 2263, instr consent;

**Instructor:** STAFF

**Description:** This is offered concurrently with Econ 8001 (a Ph.D micro theory course for graduate students from other departments). Please contact the instructor before registering for the course. You MUST have completed all prerequisites. This is a seven week mini-semester course worth two credits.

**Style:** 75% Lecture. in recitation section

**ECON 4162 Microeconomic Analysis**

A-F only, 4 credit(s); prereq 4161, instr consent;

**Instructor:** STAFF

**Description:** This is offered concurrently with Econ 8002 (a Ph.D micro theory course for graduate students from other departments). Please contact the instructor before registering for the course. You MUST have completed all prerequisites. This is a seven week mini-semester course worth two credits.

**Style:** 75% Lecture. in recitation section

**ECON 4165 Macroeconomic Theory**

2 credit(s); prereq [3102, [[Math 2243, Math 2263] or equiv]],
ECON 4166 Macroeconomic Theory
2 credit(s); prereq 4165, instr consent; Instructor: STAFF
Description: This is offered concurrently with Econ 8106 (a Ph.D macro theory course for economics graduate students). Please contact the instructor before registering for the course. You MUST have completed all prerequisites. This is a seven week mini-semester course worth two credits.
Style: 75% Lecture. in recitation section

ECON 4211 Principles of Econometrics
4 credit(s); prereq [[1101, 1102] or equiv], Math 2243 [or equiv], [Stat 3021, Stat 3022] or equiv, familiarity with computers; Instructor: STAFF
Description: This is a required course for Economics B.A.-Quant majors. Students must have successfully completed all prerequisites PRIOR to taking this course. The course includes regression analysis, estimation procedures, and computer applications.
Style: 75% Lecture. Recitation discussion
Exam Format: problems

ECON 4261 Introduction to Econometrics
A-F only, 4 credit(s); prereq [3101 or equiv]. [[Math 1271, Math 1272] or equiv], Math 2243, Math 2263, [Stat 4101, Stat 4102] or [Stat 5101, Stat 5102]; Math 4242 strongly recommended; Instructor: STAFF
Description: This is a required course for Economics B.S. majors. Students must have completed all prerequisites successfully PRIOR to taking this course. The course includes the basic linear regression model, time series analysis, panel data, discrete choice models. Computer applications (normally GAUSS is used).
Style: 75% Lecture. Recitation discussion
Exam Format: problems

ECON 4313 The Russian Economy
3 credit(s); prereq 1101, 1102 or equiv; Instructor: STAFF
Style: 90% Lecture, 10% Discussion.
Exam Format: essay and problems

ECON 4331W Economic Development
3 credit(s); prereq 3101, 3102 or equiv; Credit will not be granted if credit has been received for: ECON 4301; Meets CLE req of Writing Intensive; Instructor: STAFF
Description: Econ 4331W is a writing intensive course, and students need at least a C in the paper to pass the course. Economic growth and development - indicators, evidence in low and high income countries. Growth theory. Resource allocation.
Style: 90% Lecture, 10% Discussion.

ECON 4337 Comparative Economic Systems
3 credit(s); prereq 3101, 3102 or equiv; Credit will not be granted if credit has been received for: ECON 4307; Instructor: STAFF
Description: Study of various economic systems, functions and comparisons. Post-socialist transitions in Eastern Europe, Russia, Asia, and China. Economic reforms. Case studies of various countries.
Style: 90% Lecture, 10% Discussion.
### ECON 4731 Macroeconomic Policy

**3 credit(s); prereq 3101, 3102 or equiv;**

**Instructor:** STAFF

**Description:** The emphasis of this course is on Macroeconomic Policy, studied in a quantitatively rigorous way. We begin by reviewing the household consumption and leisure choice, and the market-clearing model. We then study inflation, unemployment, growth, taxation, government debt, and monetary policy and fiscal policy.

**Style:** 95% Lecture, 5% Discussion.

**Exam Format:** problems, short essay

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### ECON 4751 Financial Economics

**3 credit(s); prereq 3101 or equiv, Math 1271 or equiv, 1 sem statistics; Credit will not be granted if credit has been received for:** ECON 4751H

**Instructor:** STAFF

**Description:** Financial decisions of firms and investors. Determination of interest rates and asset prices. Role of risk and uncertainty. Emphasis on economic models rather than details of financial institutions.

**Style:** 95% Lecture, 5% Discussion.

**Exam Format:** problems

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### ECON 4821 Public Economics

**3 credit(s); prereq Credit will not be granted if credit has been received for:** ECON 3801; prereq 3101, 3102 or equiv; Credit will not be granted if credit has been received for: ECON 3801

**Instructor:** STAFF

**Description:** Different views of the role of government in the economy. Effects of tax policies and spending policies. Optimal policies. Consumer and producer responses to government policies. Applications to the U.S. government. Some case studies.

**Style:** 95% Lecture, 5% Discussion.

**Exam Format:** Short essays, problem solving

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### ECON 4831 Cost-Benefit Analysis

**3 credit(s); prereq 3101 or equiv; Credit will not be granted if credit has been received for:** ECON 4611H

**Instructor:** STAFF

**Description:** Principles for evaluating benefits and costs of public projects or programs. Issues concerned with definition of benefits and costs. Rate of return, rate of discount. Market imperfections, risk, and uncertainty. Case studies.

**Style:** 95% Lecture, 5% Discussion.

**Exam Format:** Essay; problem solving

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### ECON 4960 Topics in Economics

**A-F only, 3 credit(s), max credits 6; prereq [3101 or 3102 or equiv], MATH 1271; may change based on topic;**

**Instructor:** Adams, Brian M

**Description:** Student may contact the instructor or department for information.

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### ECON 4993 Directed Study

**1-4 credit(s), max credits 4, 1 completion allowed; prereq For honors thesis, instr consent ;**

**Instructor:** STAFF

**Description:** This is for economics honors theses only.

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### ECON 5890 Economics of the Health-Care System

**A-F only, 3 credit(s); prereq 3101 or instr consent ; Credit will not be granted if credit has been received for:** PUBH 6832;

**Instructor:** Nyman, John A.

**Description:** This course is intended to give the student an understanding of and appreciation for the traditional issues in health economics. Historical, theoretical and empirical perspectives are applied to the various topics covered: the role of prices, the production of health, the demand for health care, the demand for health insurance, the health insurance market and managed care, the market for physicians' services, production and cost of health care in hospitals and nursing homes, labor issues, pharmaceuticals, cost effectiveness analysis, equity and efficiency, role of government in the health economy, international comparisons, Medicaid and Medicare, and national health insurance and reform. The course relies on the use of conventional microeconomic analytical tools. Students should also have a basic knowledge of fundamental descriptive and analytical statistics. Students will not be expected to know calculus.

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### ECON 8001 Microeconomic Analysis

**2 credit(s); prereq 5151 or equiv, Math 2243, Math 2263 or equiv or instr consent;**

**Instructor:** Werner, Jan

**Description:** Student may contact the instructor or department for information.

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### ECON 8002 Microeconomic Analysis

**2 credit(s); prereq 8001;**

**Instructor:** Allen, Beth Elaine

**Description:** Student may contact the instructor or department for information.

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### ECON 8101 Macroeconomic Theory

**2 credit(s); prereq 5151 or equiv, Math 2243 or equiv, concurrent enrollment Math 5615 or concurrent registration in Math 8601, grad econ major or instr consent;**

**Instructor:** Werner, Jan

**Description:** Student may contact the instructor or department for information.

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### ECON 8102 Microeconomic Theory

**2 credit(s); prereq 8101, concurrent enrollment Math 5615 or concurrent enrollment Math 8601, grad econ major or instr consent;**

**Instructor:** Allen, Beth Elaine

**Description:** Student may contact the instructor or department for information.

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### ECON 8105 Macroeconomic Theory

**2 credit(s); prereq 5152 or equiv, Math 2243, Math 2263 or equiv or instr consent;**

**Instructor:** Jones, Larry

**Description:** Student may contact the instructor or department for information.

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### ECON 8106 Macroeconomic Theory

**2 credit(s); prereq 8105;**

**Instructor:** Chari, Varadarajan V

**Description:** Student may contact the instructor or department for information.

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### ECON 8185 Advanced Topics in Macroeconomics

**2 credit(s), max credits 4; prereq 8108 or instr consent;**

**Instructor:** Rios-Ruiz, Jose Victor

**Description:** Student may contact the instructor or department for information.

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### ECON 8191 Workshop in Mathematical Economics

**1-3 credit(s), max credits 10, 10 completions allowed; prereq 8104 or instr consent ;**

**Instructor:** Allen, Beth Elaine

**Description:** Student may contact the instructor or department for information.

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### ECON 8205 Applied Econometrics

**2 credit(s); prereq Math 4242 or equiv, concurrent**
enrollment Econ 8101, concurrent enrollment Econ 8105, concurrent enrollment Stat 5101 or instr consent;
Instructor: Petrin,Amil Kenneth
Description: Student may contact the instructor or department for information.

ECON 8206 Applied Econometrics
2 credit(s); prereq 8205, concurrent enrollment 8102, concurrent enrollment 8106, concurrent enrollment Stat 5101 or instr consent;
Instructor: Petrin,Amil Kenneth
Description: Student may contact the instructor or department for information.

ECON 8311 Economic Growth and Development
2 credit(s); prereq 8104, 8106 or instr consent;
Instructor: Luttmer,Erzo
Description: Student may contact the instructor or department for information.

ECON 8312 Economic Growth and Development
2 credit(s); prereq 8311 or instr consent;
Instructor: Storesletten,Kjetil
Description: Student may contact the instructor or department for information.

ECON 8391 Workshop in Economic Growth and Development
1-3 credit(s), max credits 10, 10 completions allowed; prereq instr consent;
Instructor: Chari,Varadarajan V
Description: Student may contact the instructor or department for information.

ECON 8401 International Trade and Payments Theory
2 credit(s); prereq 8103, 8105 or instr consent;
Instructor: Holmes,Thomas Joseph
Description: Student may contact the instructor or department for information.

ECON 8502 Wages and Employment
2 credit(s); prereq 8501 or instr consent;
Instructor: Fogli,Alessandra
Description: Student may contact the instructor or department for information.

ECON 8581 Advanced Topics in Labor Economics
2 credit(s), max credits 4; prereq 8502 or instr consent;
Instructor: Rios-Rull,Jose Victor
Description: Student may contact the instructor or department for information.

ECON 8601 Industrial Organization and Government Regulation
2 credit(s); prereq 8102 or instr consent;
Instructor: Holmes,Thomas Joseph
Description: Student may contact the instructor or department for information.

ECON 8602 Industrial Organization and Government Regulation
2 credit(s); prereq 8601 or instr consent;
Instructor: Petrin,Amil Kenneth
Description: Student may contact the instructor or department for information.

ECON 8691 Workshop in Applied Microeconomics
1-3 credit(s), max credits 10, 10 completions allowed; prereq instr consent;
Instructor: Petrin,Amil Kenneth
Description: Student may contact the instructor or department for information.

ECON 8701 Monetary Economics
2 credit(s); prereq 8103, 8106 or instr consent;
Instructor: Weber,Warren E
Description: Student may contact the instructor or department for information.

ECON 8702 Monetary Economics
2 credit(s); prereq 8701 or instr consent;
Instructor: Weber,Warren E
Description: Student may contact the instructor or department for information.

ECON 8704 Financial Economics
2 credit(s); prereq 8103, 8106 or instr consent;
Instructor: Mc Grattan,Ellen Rose
Description: Student may contact the instructor or department for information.

ECON 8891 Workshop in Public Economics and Policy
1-3 credit(s), max credits 10, 10 completions allowed; prereq instr consent;
Instructor: Phelan,Christopher James
Description: Student may contact the instructor or department for information.

Education and Human Development
110 Wuling Hall

EDHD 1920 CEHD Special Topics
1-3 credit(s), max credits 6;
Instructor: Miller,Rosemary F
Description: America Reads: Tutoring, Literacy, and Engagement is a 1 credit course that is required for all first and second year America Reads Tutors. The course consists of an initial New Tutor Orientation, three 2-hour class sessions, and corresponding community engagement assignments which will take place within the greater community. Fall Semester?s topics focus on pertinent issues related to the tutoring experience and which contribute to an overall understanding of the Twin Cities community. Topics include- ?Immigration in the Twin Cities?, ?Lesson Planning and Choosing Appropriate Children?s Books?, and ?Developing Reading Comprehension?. Participation in this class will assist students in becoming more proactive, competent tutors and more aware, engaged community members. Grades will be awarded based on attendance, in-class participation, and successful completion of all journal and community engagement assignments. America Reads supervisor?s permission needed to register.

EDHD 1920 CEHD Special Topics
1-3 credit(s), max credits 6;
Instructor: Miller,Rosemary F
Description: America Reads: Tutoring, Literacy, and Social Justice is the second class in the America Reads course requirement two-part series. Continued employment as an America Reads Tutor is required to register. This course includes four 2-hour class sessions and corresponding community engagement assignments. Students in this course will continue to develop their tutoring techniques and skills and more deeply explore what it means to be a civically engaged and aware citizen. Topics covered include--Eye on Literacy, Tutoring English Language Learners, Social Justice and Civic Engagement, and Homelessness in the Twin Cities. Grades are awarded based on attendance, in-class participation, and completion of all journal and community engagement assignments. Completion of this semester fulfills the course requirement for all first year America Reads Tutors.

EDHD 1920 CEHD Special Topics
1-3 credit(s), max credits 6;
Instructor: Miller,Rosemary F
Description: America Reads: Tutoring, Literacy, and Social Justice is the second class in the America Reads course requirement two-part series. Continued employment as an America Reads Tutor is required to register. This course includes four 2-hour class sessions and corresponding community engagement assignments. Students in this course will continue to develop their tutoring techniques and skills and more deeply explore what it means to be a civically engaged and aware citizen. Topics covered include--Eye on Literacy, Tutoring English Language Learners, Social Justice and Civic Engagement, and Homelessness in the Twin Cities. Grades are awarded based on attendance, in-class participation, and completion of all journal and community engagement assignments. Completion of this semester fulfills the course requirement for all first year America Reads Tutors.
engagement assignments. Students in this course will continue to develop their tutoring techniques and skills and more deeply explore what it means to be a civically engaged and aware citizen. Topics covered include—Eye on Literacy, Tutoring English Language Learners, Social Justice and Civic Engagement, and Homelessness in the Twin Cities. Grades are awarded based on attendance, in-class participation, and completion of all journal and community engagement assignments. Completion of this semester fulfills the course requirement for all first year America Reads Tutors.

EDHD 3001 Exploring the Teaching Profession I
A-F only, 2 credit(s); prereq DirecTrack to Teaching program or college consent ;
Instructor: Stone PhD,Karla
Description: Student may contact the instructor or department for information.

EDHD 5003 Developmental and Individual Differences in Educational Contexts
A-F only, 2 credit(s); prereq Jr or sr or post-bac or MEd/initial licensure or CLA music ed or preteaching major or FOE or agriculture or kinesiology or instr consent ;
Instructor: Rodgerston,Richard W
Description: Overview of developmental and individual differences of children and adolescents in educational contexts; emphasis on a dynamic systems, evolutionary (selectionist), and ecological perspectives; development transitions in childhood and adolescence; interactions between the student, environment, and task; and accommodations and adaptations for students in special education.
Grading: 100% reports/papers.

EDHD 5004 Teaching Students With Special Needs in Inclusive Settings
A-F only, 2 credit(s); prereq Teacher preparation program in [CEHD or music education or agriculture education or DirecTrack] or instr consent ; licensure students must take this course for a grade;
Instructor: Seifert PhD,Kathy
Description: Student may contact the instructor or department for information.

EDHD 5007 Technology for Teaching and Learning
A-F only, 1.5 credit(s); prereq [MEd/initial licensure or CLA music ed major or preteaching major or instr consent], basic computer skills;
Instructor: Hatten,Jim
Description: Student may contact the instructor or department for information.

EDHD 5007 Technology for Teaching and Learning
A-F only, 1.5 credit(s); prereq [MEd/initial licensure or CLA music ed major or preteaching major or instr consent], basic computer skills;
Instructor: Donna,Joel Dominic
Description: Student may contact the instructor or department for information.

EDHD 5100 International Topics for Graduate Students
1-12 credit(s), max credits 12, 3 completions allowed;
Instructor: Ardichvili,Alexandre A
Description: Student may contact the instructor or department for information.

EDPA 1301W Personal Leadership in the University
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: PA 1961W; Meets CLE req of Writing Intensive;
Instructor: Knudson,Laura J
Description: This introductory level course presents leadership using a personal leadership perspective and framework. Students taking this course will have the opportunity to examine their own views on leadership, explore the differences between personal and positional leadership, study characteristics of effective leadership and learn about the importance of personal development.

EDPA 1301W Personal Leadership in the University
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: PA 1961W; Meets CLE req of Writing Intensive;
Instructor: Vang-Lo,Ah
Description: Student may contact the instructor or department for information.

EDPA 1301W Personal Leadership in the University
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: PA 1961W; Meets CLE req of Writing Intensive;
Instructor: Fredrickson,Brian Steven
Description: This introductory level course presents leadership using a personal leadership perspective and framework. Students taking this course will have the opportunity to examine their own views on leadership, explore the differences between personal and positional leadership, study characteristics of effective leadership and learn about the importance of personal development.

EDPA 1301W Personal Leadership in the University
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: PA 1961W; Meets CLE req of Writing Intensive;
Instructor: Shultz,Joseph Brian
Description: This introductory level course presents leadership using a personal leadership perspective and framework. Students taking this course will have the opportunity to examine their own views on leadership, explore the differences between personal and positional leadership, study characteristics of effective leadership and learn about the importance of personal development.

EDPA 1301W Personal Leadership in the University
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: PA 1961W; Meets CLE req of Writing Intensive;
Instructor: Fredrickson,Brian Steven
Description: This introductory level course presents leadership using a personal leadership perspective and framework. Students taking this course will have the opportunity to examine their own views on leadership, explore the differences between personal and positional leadership, study characteristics of effective leadership and learn about the importance of personal development.

EDPA 1301W Personal Leadership in the University
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: PA 1961W; Meets CLE req of Writing Intensive;
Instructor: Hollaran,Lynn K
Description: This introductory level course presents leadership using a personal leadership perspective and framework. Students taking this course will have the opportunity to examine their own views on leadership, explore the differences between personal and positional leadership, study characteristics of effective leadership and learn about the importance of personal development.

EDPA 1301W Personal Leadership in the University
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: PA 1961W; Meets CLE req of Writing Intensive;
Instructor: Hellstrom,David P
Description: This 1000 level course introduces leadership using...
a personal leadership perspectives and frameworks. Students taking this course will have the opportunity to examine their own views on leadership, explore the differences between personal and positional leadership, study characteristics of leaders within the University of Minnesota and learn about the importance of personal development.

EDPA 3302 Leadership, You, and Your Community
A-F only, 3 credit(s); prereq [1301W or PA 1961W], grade of at least C, [soph or at least 60 cr]; Credit will not be granted if credit has been received for: PA 3961; Instructor: Ve Lure Roholt, Christine Elizabeth
Description: This course will examine leadership and leadership capacities within the context of social change and public work. Students taking this course will have the opportunity to examine their own views of leadership and social change, learn about leadership theory and core concepts of Public Achievement, and apply knowledge to practice utilizing the Public Achievement model. Particular attention is given to group leadership and the effectiveness of groups and organizations accomplishing change. There are a few aspects to the content of this course which make it unique when compared to traditional collegiate and leadership instruction: As a method of examining leadership capacities within a social change movement, this class will utilize the history, current status, and stories about the issue of poverty as a context. As the theme for the course, many portions of the class content and discussion will explore the issue of poverty. This method is meant as an example of public leadership happening within the intricacies of a social movement and issue. Another major content component of this course is the Public Achievement model. A little less than half of the assigned class days will be dedicated to working within smaller groups (encompassing about 1/3 of the class in each) on a Public Achievement project. For these projects, each of the instructors, in addition to a teaching assistant, will be assigned as a coach for one Public Achievement group. More information about Public Achievement is available in the subsequent pages of this syllabus.
Style: 10% Lecture, 5% Film/Video, 20% Discussion, 50% Small Group Activities, 10% Student Presentation, 5% Guest Speakers. The major portion of this class is the Public Achievement process.
Grading: 20% final exam, 20% reports/papers, 5% quizzes, 5% attendance, 10% journal, 35% in-class presentation, 5% class participation.
Exam Format: Final exam is a take-home written essay.

EDPA 3302 Leadership, You, and Your Community
A-F only, 3 credit(s); prereq [1301W or PA 1961W], grade of at least C, [soph or at least 60 cr]; Credit will not be granted if credit has been received for: PA 3961; Instructor: Amsundson, Aaron R
Description: This course will examine leadership and leadership capacities within the context of social change and public work. Students taking this course will have the opportunity to examine how values (their own and others) guide leadership and social change. We will focus on how change is possible around a given social issue and how local organizations/businesses/groups utilize leadership to create positive change. Learning Objectives: (a) Demonstrate resilience through taking risks, failing, questioning and then adapting your actions and thinking to the contexts you encounter in class and in your community. How do you prepare to come in right again, again and again? (b) Improve ability to research and analyze complex social issues/systems in order to create sustainable and effective actions. How do you create an adaptive solution to a challenging problem? What is the importance of and how does one explore various viewpoints, complete in-depth research and look at the system as a whole? (c) Push your personal and interpersonal boundaries to support a safe, learning community during our classroom time and a regular self-renewal practice. How do you help to create our safe community? How do you prohibit or damage the safe community? Why is it vital for leaders to find ways to renew themselves personally and professionally? What are some ways to do this? (d) Strengthen self-awareness of the interaction of your personal framework of being in the world and other's framework of being in the world. How do your set of values, political, social and philosophical viewpoints live in the world along side that of other people's set of values, political, social and philosophical viewpoints? Why and how does this matter to our leadership (individually and collectively)? (e) Increase awareness of and practice the discipline (mental, physical, and emotional) that is required to become a responsible and accountable leader and learner in our world today. (f) Explore more deeply these concepts important to leadership. What exactly do they mean? How do you make sense of them in your practice of leadership? --Adaptive Leadership --Values --Power --Relationships --Accountability and trust

EDPA 3302 Leadership, You, and Your Community
A-F only, 3 credit(s); prereq [1301W or PA 1961W], grade of at least C, [soph or at least 60 cr]; Credit will not be granted if credit has been received for: PA 3961; Instructor: Hellstrom, David P
Description: Student may contact the instructor or department for information.

EDPA 3305 Learning About Leadership Through Film and Literature
3 credit(s); Instructor: Seashore, Karen Rose
Description: ?Uneasy lies the head that wears a crown? (Shakespeare, Henry IV, Part 2) Being a leader? whether a king, a school principal, or the chair of a student committee? creates opportunities and dilemmas for individuals. Being a follower in any organized settings also poses issues for individuals a groups that seek to have an impact on their settings. As with many other subjects, the topic of leadership can be approached in many ways. This class will combine readings from leadership studies, literature, and film to examine a number of specific issues related to leadership and followership, including: ethical dilemmas, different styles of leadership and their consequences, the intersection of public and private in the course of exercising leadership, and the competing loyalties and pressures felt by leaders and followers. In addition, we will address fundamental questions about the nature and desirability of leadership.
Style: 20% Lecture, 20% Film/Video, 20% Discussion, 20% Small Group Activities, 10% Guest Speakers, 10% Web Based.
Grading: 50% reflection paper, 10% in-class presentation, 40% class participation.

EDPA 3402 Leadership Minor: Field Experience
A-F only, 3 credit(s); prereq [3302W or PA 3961W] with grade of at least C; Credit will not be granted if credit has been received for: PA 3971; Instructor: Ve Lure Roholt, Christine Elizabeth
Description: Student may contact the instructor or department for information.

EDPA 3402 Leadership Minor: Field Experience
A-F only, 3 credit(s); prereq [3302W or PA 3961W] with grade of at least C; Credit will not be granted if credit has been received for: PA 3971; Instructor: Yawson, Robert Mayfield
Description: Student may contact the instructor or department for information.

EDPA 4303W Leadership for Global Citizenship
A-F only, 3 credit(s); prereq [3402 or PA 3971]; Credit will not be granted if credit has been received for: PA 4961W; Meets CLE req of Writing Intensive; Instructor: Werner, Linnette
Description: Student may contact the instructor or department for information.

EDPA 5001 Formal Organizations in Education
3 credit(s); Instructor: Anderson, Melissa S.
Description: This course presents four frameworks that can be used for understanding organizations, how they work, and how people in them behave. It then branches out to other
EDPA 5001 Formal Organizations in Education
3 credit(s);
Instructor: Brunner, C Cyss
Description: Classical/current theories of organizations. Applications to education and related fields.

EDPA 5048 Cross-Cultural Perspectives on Leadership
3 credit(s);
Instructor: Quast, Louis Neumann
Description: This course is designed for students who wish to develop a comprehensive understanding of leadership and culture. To achieve this goal, the course will use concepts drawn from several academic disciplines and cultural contexts. Students will be expected to integrate these concepts and learn how to translate them from theory to practice. As a result of taking this course, participants will be able to: 1) Define and explain key culture and leadership theories, and current themes in emerging theories. 2) Demonstrate deeper expertise in one leadership theory through leading a 30 minute group presentation and discussion. 3) Synthesize academic, professional, and life experience in a reflective essay regarding personal cultural and leadership influences, using selected models from the course. 4) Demonstrate deeper expertise in one culture and/or leadership theory through completing a critical review of one book selected from the course bibliography. 5) Investigate the cross-cultural leadership experiences of one leader by conducting an interview, analyzing your findings, and documenting your findings and conclusions in a written report. 6) Contribute actively in group discussions of culture and leadership issues. 7) Develop interpersonal communication skills essential to effective cross-cultural leadership through multiple group assignments and activities. 8) Integrate and synthesize your learning about cross-cultural leadership through completing a final case analysis project. This is a course in both cross-cultural and comparative leadership, using examples from diverse cultural and international contexts. The course is being co-taught by three individuals: Professor Gerald Fry, who has extensive leadership experience in the Asia-Pacific region; Professor Louis Quast, Associate Chair, OLPD, Holder of an Endowed Chair in Leadership with over two decades of leadership consulting experience with diverse organizations; and Dr. Kyong-Ah Nam, Doctoral Fellow from Korea whose specialty is intercultural leadership and communication, also active in intercultural leadership consulting.

EDPA 5056 Case Studies for Policy Research
A-F only, 3 credit(s);
Instructor: Demerath, Peter
Description: Student may contact the instructor or department for information.

EDPA 5080 Special Topics: Educational Policy and Administration
1-3 credit(s), max credits 24, 24 completions allowed;
Instructor: Dejaeghere, Joan Geraly
Description: Student may contact the instructor or department for information.

EDPA 5080 Special Topics: Educational Policy and Administration
1-3 credit(s), max credits 24, 24 completions allowed;
Instructor: Osburn Jr., Robert H
Description: International development influences and is influenced by religion, both institutionally and ideologically. Explore development theory, religion and development policy, and the influence of religious cultures on economic, political and educational development, with particular attention to women, human rights, secularization, and the role of religious NGOs.

EDPA 5080 Special Topics: Educational Policy and Administration
1-3 credit(s), max credits 24, 24 completions allowed;
Instructor: Weerts, David J
Description: External Relations and Higher Education This special topics course is designed to introduce students to the study and practice of external relations in higher education. During this nine-week session, students and instructors will examine how colleges and universities build strategic alliances with external partners to the benefit of institutions and the constituencies they serve. The primary stakeholders of interest in this course include state and federal policy makers, corporate partners, community partners, alumni, donors, and foundations. Through case studies, guest speakers, interactive exercises, and large and small group discussions, the course will address topics of institutional branding and public relations, town-gown relations, crisis management, institutional advancement, alumni relations, and federal and state lobbying. Assigned readings draw on literature from organizational theory, public relations, political science, communication theory and institutional advancement research and practice. Upon completing this course, students will be able to: 1) Articulate various philosophies and theoretical frameworks that guide external relations research and practice, and how these conceptual pieces inform the development of external relations programs. 2) Identify and apply best practices of external relations and relate these practices to unique institutional missions and contexts. 3) Develop strategies for implementing and improving external relations strategies on their own campuses. 4) Consider future directions for research on external relations topics.

EDPA 5095 Problems: Educational Policy and Administration
1-3 credit(s), max credits 24, 24 completions allowed;
Instructor: STAFF
Description: Course or independent study on specific topic within department program emphasis.

EDPA 5096 Internship: Educational Policy and Administration
1-9 credit(s), max credits 24, 24 completions allowed;
Instructor: STAFF
Description: Internship in elementary, secondary, general, or postsecondary administration, or other approved field-related setting.

EDPA 5103 Comparative Education
3 credit(s);
Instructor: Fry, Gerald Walton
Description: Student may contact the instructor or department for information.

EDPA 5104 Strategies for International Development of Education Systems
A-F only, 3 credit(s); prereq Grad student;
Instructor: Johnstone, Christopher J
Description: Student may contact the instructor or department for information.

EDPA 5141 Global Youth Policy and Leadership: Comparative Youth Policy and Leadership
A-F only, 3 credit(s);
Instructor: Schneider, X. Byron J
Description: Comparative approach to study of public responses at global level to youth development and leadership issues. Focus on social systems (such as education, health, employment and recreation), role of individuals, communities, governments and international organizations which are directed to provide programs/services to young persons.

EDPA 5142 Youth Futures in International and Global Contexts
A-F only, 3 credit(s); prereq CID student or instr consent ;
Instructor: Harkins, Arthur M  
Description: Address strategic trends in global youth development, including positive/negative implications. Attention to reconciling positive/negative trends with normative scenarios with respect to presence, absence, and projected likelihood of suitable policies, workable collaborations, and funding.

EDPA 5144 Cultural Models, Simulations, and Games  
3 credit(s); prereq Upper div or grad student;  
Instructor: Harkins, Arthur M  
Description: Student may contact the instructor or department for information.

EDPA 5321 The Principal as Leader of High-Performing Schools  
3 credit(s);  
Instructor: Massey, Steven Duane  
Description: Student may contact the instructor or department for information.

EDPA 5322 Leaders in the Superintendency and Central Office  
3 credit(s);  
Instructor: Brunner, C Cryss  
Description: Role and responsibility of the superintendent in school district. Emphasizes real life experiences, leadership potential as (CEO). Purposes, power, politics, and practices of position. Interplay of internal school forces, external community forces analyzed in multiple contexts. Manifestations of leadership in public, high-profile appointment.

EDPA 5341 The American Middle School  
3 credit(s);  
Instructor: Schmidt, Noel Nevin  
Description: This course will focus on the uniqueness of the early adolescent. Special attention will be spent on brain development and how this affects their social and emotional states. We will discuss practical suggestions on how to effectively teach them and also what tactics to avoid. For educators working with middle-level students.

EDPA 5344 School Law  
3 credit(s);  
Instructor: Forbes, Paula Gail  
Description: Student may contact the instructor or department for information.

EDPA 5346 Politics of Education  
A-F only, 3 credit(s); prereq postbac, MEd, or grad student;  
Instructor: Alexander, Nicola  
Description: Political dimensions of policy formulation/implementation in education. Use of power/influence in shaping educational policies and in resolving conflicts over educational issues. Analysis of consequences/cross-impacts.

EDPA 5364 Context and Practice of Educational Leadership  
A-F only, 3 credit(s);  
Instructor: York-Barr, Jennifer  
Description: Current research/practice on educational leadership focused on creating school cultures conducive to continuous improvement/change. Strategies for personal/organizational leadership in PK-12 setting.

EDPA 5374 Leadership for Professional Development  
4 credit(s); prereq Postbaccaleaureate, at least 3 yrs teaching experience;  
Instructor: York-Barr, Jennifer  
Description: Designing, implementing, evaluating staff development in PK-12 settings. Research-based standards for effective staff development. Need for embedded time for collaborative learning, evaluating staff/student outcomes.

EDPA 5385 Licensure Seminar: Program Policies and Inclusionary Leadership  
S-N only, 1 credit(s);  
Instructor: Taijale, Lyle Eugene  
Description: Student may contact the instructor or department for information.

EDPA 5386 Leadership Portfolio Seminar  
S-N only, 1 credit(s); prereq 5385 or Concurrent registration is required (or allowed) in 5385;  
Instructor: Latimer, Sally Winifred  
Description: Student may contact the instructor or department for information.

EDPA 5388 Leadership for Master(ful) Scheduling  
2 credit(s); prereq 5387;  
Instructor: Dewey, Ph.D. Richard  
Description: We will examine the work of high-performing Professional Learning Communities and the implications for moving from building a master schedule to Leadership for the Master(ful) Scheduling? of time, space, motion and people. We will consider a variety of Master(ful) Scheduling? strategies and engage in hands-on work with Infinite Campus software and scheduling-building logic, while focusing on the six pillars of Master(ful) Scheduling?.

EDPA 5389 Special Education Law for Leaders  
1 credit(s); prereq Designed for students working on licensure in PK-12 administration;  
Instructor: Law, David W  
Description: Student may contact the instructor or department for information.

EDPA 5396 Field Experience in PK-12 Administration: Authentic Practice in Leadership  
S-N only, 3 credit(s), max credits 12, 4 completions allowed; prereq instr consent;  
Instructor: Dragseth, Kenneth Allen  
Description: This course provides practical field experience for aspiring school administrators who are seeking Minnesota licensure as PK-12 Principal, District Superintendent, Director of Special Education, or Director of Community Education. It features practical experience in the appropriate field under the guidance of a practicing school administrator and the University instructor. Each planned field experience (internship) is designed by the mentoring administrator, the university instructor, and the administrative intern based upon the State of Minnesota required competencies for each administrative license and the student's preassessment of competencies. Four required plus four elective administrative projects are required of each class member.

Grading: S/N

EDPA 5501 Principles and Methods of Evaluation  
3 credit(s); Credit will not be granted if credit has been received for: EPSY 5243;  
Instructor: STAFF  
Description: Student may contact the instructor or department for information.

EDPA 5521 Cost and Economic Analysis in Educational Evaluation  
3 credit(s);  
Instructor: STAFF  
Description: Use and application of cost-effectiveness, cost-benefit, cost-utility, and cost-feasibility in evaluation of educational problems and programs.

EDPA 5528 Focus Group Interviewing Research Methods  
3 credit(s);  
Instructor: Krueger, Richard A  
Description: Students will develop skills needed to conduct focus group interviews which involve learning and practicing techniques that result in successful focus groups. Students will be expected to conduct a focus group study and report results for the final class session. Attention is placed on using focus groups in interpretative environments suitable for academic research, or as mixed-method applied research in areas such as health, medical, educational, governmental and non-profit environments.
EDPA 5701 U.S. Higher Education
3 credit(s);
Instructor: Hendel, Darwin Dale
Description: This course is an introductory survey of U.S. higher education. It addresses both the historical development of, and contemporary issues in, higher education in the United States. The content of the course is organized around the higher education topics in historical and contemporary contexts simultaneously. The outcomes sought for students taking the course include the following: 1) Basic knowledge of the system of higher education in the United States; 2) Understanding of historical events, including the political, psychological and economic factors that shaped higher education and continues to affect institutions today; 3) Sufficient background for subsequent in-depth study in the field of higher education in the United States; and 4) Understanding of changes in higher education across the world; and 5) A critical perspective on the higher education literature.
Style: 30% Lecture, 8% Film/Video, 13% Discussion, 15% Small Group Activities, 8% Student Presentation, 3% Field Trips, 8% Guest Speakers, 15% Web Based.
Grading: 50% reports/papers, 10% journal, 5% reflection paper, 10% in-class presentation, 15% class participation.

EDPA 8002 Critical Issues in Contemporary Education
3 credit(s); prereq EdD or PhD student;
Instructor: Magnusson PhD, Deanne L.
Description: Student may contact the instructor or department for information.

EDPA 8011 Doctoral Research Seminar I
S-N only, 1 credit(s); prereq EdPA doctoral student;
Instructor: Hendel, Darwin Dale
Description: Student may contact the instructor or department for information.

EDPA 8015 Research Design and Educational Policy
3 credit(s); prereq 8011; EdPA PhD student;
Instructor: Yeh, Stuart S
Description: This 3 credit introductory course in research design and educational policy is required for, and limited to, Educational Policy and Administration Ph.D. students. The course covers the logic of research design, from research questions and audience considerations to the selection of a suitable design for collecting and analyzing quantitative, qualitative, and mixed-method data. The course provides a framework for understanding how specialized methodology, statistics and content-area courses, including courses in other units of the University, inform decisions related to research design. Quantitative and qualitative research methods are introduced, with a focus on issues in selecting appropriate methods. It is recommended that students pursue additional coursework in either quantitative methods, qualitative methods, or both before selecting methods for the dissertation. Each class session will cover key topics related to research design, as well as the strengths, weaknesses, and uses of particular research designs. Students will learn skills in applying key concepts to case discussions of the major research designs, based on examples that illustrate relationships among the literature review, research questions, research design and methods, data analysis and conclusions. Core concepts will be revisited and elaborated throughout the course as students build sophistication regarding criteria and standards for judging the adequacy of a given research design as it is used to answer specific research questions. Instructional strategies include lecture, small group cooperative activities and discussions, whole group discussions, student presentations and papers.
Grading: Student grades will be based on two (2) short research presentations (40%), the Final Research Project Proposal (30%), and the Final Research Presentation (15%), and class participation (15%).

EDPA 8087 Seminar: Educational Policy and Administration
1-3 credit(s), max credits 24, 24 completions allowed;
Instructor: Dejaeghere, Joan Geralyn
Description: Student may contact the instructor or department for information.

EDPA 8101 International Education and Development
A-F only, 3 credit(s); prereq doctoral student or instr consent;
Instructor: Vavrus, Frances
Description: Student may contact the instructor or department for information.

EDPA 8121 Doctoral Seminar: Comparative and International Development Education
S-N only, 1-6 credit(s), max credits 6, 4 completions allowed; prereq EdPA PhD candidate;
Instructor: Dejaeghere, Joan Geralyn
Description: Student may contact the instructor or department for information.

EDPA 8595 Evaluation Problems
1-6 credit(s), max credits 24, 24 completions allowed; prereq [5501 or EPSY 5243], instr consent; Credit will not be granted if credit has been received for: EPSY 8295;
Instructor: King, Jean A.
Description: Student may contact the instructor or department for information.

EDPA 8596 Evaluation Internship
1-9 credit(s), max credits 24, 24 completions allowed; prereq [5501 or EPSY 5243], instr consent; Credit will not be granted if credit has been received for: EPSY 8296;
Instructor: King, Jean A.
Description: Student may contact the instructor or department for information.

EPSY 1905 Freshman Seminar: Chess and 21st Century Skills
1-3 credit(s), max credits 6; prereq Fr;
Instructor: Bart, William M
Description: Examination of the basic components of chess, computer-based chess, how chess players think, including visual-spatial thinking and critical thinking, the psychology of critical thinking and other 21st Century reasoning skills, and research on chess cognition.
Style: See class syllabus
Grading: See syllabus
Exam Format: See syllabus

EPSY 3132 Psychology of Multiculturalism in Education
A-F only, 3 credit(s); Meets CLE req of Diversity and Soc Justice US;
Instructor: Hansen, Annie
Description: The PSYCHOLOGY OF MULTICULTURALISM IN EDUCATION examines contemporary and historical perspectives on issues of social and cultural diversity in the United States, with special emphasis on issues of race, ethnicity, gender, social class, age, disability, sexual orientation, and religious diversity. Processes of oppression, stereotyping, prejudice and social perception biases and their relationships to education are the primary topics of the course. This course will consist of discussion, lecture, film, and structured exercise components. In addition, students will complete reflective writing exercises to apply course concepts to real-world experiences. Grading is based on class participation (20%), reflective writing assignments (20%), cooperative group project (20%), and two exams (20% each). Students will have the opportunity for small group and whole class discussion throughout the course.
Grading: 40% Lecture, 10% Film/Video, 25% Discussion, 25% Small Group Activities.
Grading: 20% mid exam, 20% final exam, 20% special projects, 20% reflection paper, 20% in-class presentation.
Exam Format: Exams are a combination of multiple choice and
short-answer. The final exam includes a cooperative component as well as an individual component. Study guides are provided.

EPSY 3133 Practicum: Service Learning, Psychology of Multiculturalism in Education
1-3 credit(s), max credits 3, 3 completions allowed; prereq [3132 or Concurrent registration is required (or allowed) in 3132], instr consent, enrollment in APECS minor; Instructor: delMas, Robert Claude
Description: Student may contact the instructor or department for information.

EPSY 3264 Basic and Applied Statistics
3 credit(s); Credit will not be granted if credit has been received for: EPSY 5231; Meets CLE req of Mathematical Thinking; Instructor: Zieffler PhD, Andrew S
Description: This course is designed to provide an overview of introductory statistics. This class is intended for undergraduate students who have completed a high school algebra course, but have not previously studied statistics. The topics to be covered in this course include sampling methods, experimental design, data exploration (e.g., using graphical and numerical summaries), data modeling and simulation, normal distributions, sampling distributions, methods of statistical inference (estimation and testing), and correlation. Upon completion of this introductory course, students should be able to: (1) think critically about statistics used in magazines, newspapers, and journal articles, (2) reason about data and (3) apply the knowledge gained in the course to begin to answer research questions using empirical data. Students are expected to keep up with all required readings and assignments, as well as to be active participants in the course. Active participation includes asking and answering questions in both large and small group discussions. It is also expected that all students have a basic understanding of computer use (e.g., e-mail, web browsers, word-processing software, etc.). Style: 10% Lecture, 30% Discussion. Independent and small-group learning activities Grading: 12% final exam, 13% special projects, 17% quizzes, 35% written homework, 23% additional semester exams. Exam Format: Short-Answer

EPSY 3301 Introduction to Educational Psychology
OPT No Aud, 3 credit(s); Credit will not be granted if credit has been received for: EPSY 5114; Meets CLE req of Social Sciences; Instructor: Varma, Sashank
Description: This course satisfies the Liberal Education Requirement for Social Sciences. This course is an introduction to the theories, data, and methods that compose Educational Psychology. In this regard, it serves as a foundation for future coursework in education and psychology. The first third of the course will review those aspects of developmental psychology that are foundational for education. The second third will consider how cognitive psychology informs questions of learning, memory, knowledge, and reasoning. With this background in place, the final third of the course will focus on the classroom: on instruction, motivation, assessment, and individual differences. The class concludes with lectures on how neuroscience informs education. Knowledge is gained not just by reading and listening, but also by “doing.” When this is in mind, students will construct much of the knowledge they take away from this class. For example, in one assignment, students will participate in a classic experiment. They will analyze and write-up their data, and in this way gain a deep understanding of the empirical support for proven educational strategies. Through this and similar assignments and projects, students will gain a deep understanding of Educational Psychology. TOPICS Expertise: Cognitive Development; Personal, Sexual, Social, and Moral Development; Group Differences; Behavioral Learning; Cognitive Learning; Problem Solving, Reasoning, and Transfer; Motivation; Instruction; Intelligence; Standardized Testing & Assessment; Neuroscience and Education. For questions or more information, please contact Dr. Sashank Varma (sashank@umn.edu). Style: 75% Lecture, 25% Discussion. Grading: 15% mid exam, 15% final exam, 35% reports/papers, 10% written homework, 15% additional semester exams, 5% attendance, 5% class participation, 10% Class participation; 10% Small assignments: 17.5% Child Observation project; 15% Lesson Analysis project; 17.5% Exam 1; 15% Exam 2; 15% Exam 3. Exam Format: The exams are non-cumulative. The exam questions are “not” fill-in-the-blank or multiple-choice. Rather, they require short answers ranging from a sentence to a paragraph.

EPSY 3302 Introduction to Communication Skills for Educational and Community Settings
OPT No Aud, 3 credit(s); Instructor: Burke, Caroline Anne
Description: This course is designed to develop communication skills for persons who will work with diverse individuals or groups in educational and community settings. The emphasis is on practice in the use of communication skills, learning about communication concepts, and development of self-reflectivity regarding one’s communication style. The major objective of this course is to enable persons to become more effective communicators with individuals and groups in educational and community settings. It is based on a premise that communication is a skill that can be learned. Therefore, the course will emphasize teaching and practicing basic skills shown to be critical in working with people in human service professions. Style: 30% Lecture, 40% Discussion, 30% Small Group Activities.

EPSY 3303 Educational Psychology Undergraduate Research Practicum
A-F only, 3 credit(s), max credits 6; prereq 3264, minor in applied psychology for educational/community settings; Instructor: McComas, Jennifer
Description: Student may contact the instructor or department for information.

EPSY 5101 Intelligence and Creativity
A-F only, 3 credit(s); Instructor: Bart, William M
Description: This course is intended to serve students (graduate, undergraduate, and adult special) interested in intelligence and creativity. The course will feature an examination of theories of intelligence and creativity and perspectives on the assessment and development of intelligence and creativity. Implications for educational practices, psychological research, and the professions and disciplines will also be studied. Attention will be provided to the role of interventions intended to enhance intellectual abilities and creativity and to relevant brain research on creativity and intelligence. The primary readings for the course will be one contemporary paperback text on creativity and one contemporary paperback text on human intelligence. This course will emphasize writing in the evaluation of student performance. Students will work in small groups to complete approximately 7 group discussion short answer essay questions. Students will learn early in the course the essay questions to be used in the course. Each student will complete a critical review of one scholarly article or book chapter, with either the article or the text chapter to be selected by the student, and one final paper. The course will be “Web Enhanced.” Style: 30% Discussion, 20% Small Group Activities, 50% Web Based presentations; web enhanced course (URL not yet available) Grading: 25% mid exam, 20% final exam, 42% reports/papers, 10% special projects, 3% other evaluation. Exam Format: short essay

EPSY 5114 Psychology of Student Learning
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: EPSY 3301; Instructor: Varma, Keisha
Description: This course has two main goals: (1) to provide a broad, introductory overview of educational psychology and (2) to show you to explore some topics of interest to you in depth.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
Educational Psychology has informed a range of practices and concerns within education. In recent decades, the field has also embraced methods of inquiry beyond the traditional paradigms of experimental psychology. This course will be taught using diverse methods. Traditional reading of the text and lecture/discussion will be used, however, this will be done in a student-centered fashion so that both the students and the instructor are engaged in a dialogue and a process of discovery about "truths" in the application of psychology to teaching and learning. As you participate in this course you will be encouraged to reflect on your own thoughts about how people learn, the intervening factors that influence learning, and best practices for supporting teaching and learning. Students will use technology to apply psychological theories, to explore issues in education, and to reflect on new ideas. Our class lectures and discussions will focus on psychological theories of learning and cognition, cognitive and social development across the lifespan, motivation, individual differences, testing, assessment, teaching methodologies, and pragmatic issues in educational settings.

**Style:** 40% Lecture, 20% Discussion, 15% Small Group Activities, 10% Student Presentation, 10% Demonstration, 5% Guest Speakers.

**Grading:** 20% final exam, 20% special projects, 15% journal, 20% reflection paper, 10% in-class presentation, 15% class participation.

**Exam Format:** This course has only a take-home final exam. The final exam will consist of a set of comprehensive essay questions, requiring you to relate and incorporate material from covered during the semester.

**EPSY 5115 Psychology of Adult Learning and Instruction**

3 credit(s);

**Instructor:** Tennyson, Robert D

**Description:**

The course leads students through the basic steps in designing and conducting a research study. Topics include: What is development, Attachment at home and school, peer relations and school success, play, aggression/bullying, socialization in families and schools, sex differences in social behavior and school orientation, moral development, and methods in studying social development.

**Style:** See syllabus for information

**Grading:** See syllabus

**EPSY 5153 Social Development in Prek to Secondary Schools**

A-F only, 3 credit(s); prereq Course in psychology;

**Instructor:** Pellegrini, Anthony D

**Description:** The course will address, using lectures and student discussion and presentations, the social development of infants, children, adolescents, and adults in educational settings, ranging from infant day care through secondary education. Topics include: What is development, Attachment at home and school, peer relations and school success, play, aggression/bullying, socialization in families and schools, sex differences in social behavior and school orientation, moral development, and methods in studying social development.

**Style:** See syllabus for information

**Grading:** See syllabus

**Exam Format:** See syllabus

**EPSY 5200 Special Topics: Psychological Foundations**

1-4 credit(s), max credits 30, 30 completions allowed;

**Instructor:** Samuels, S Jay

**Description:** Student may contact the instructor or department for information.

**EPSY 5216 Introduction to Research in Educational Psychology and Human Development**

A-F only, 3 credit(s); prereq 5261 or intro statistics course;

**Instructor:** Pellegrini, Anthony D

**Description:** The course leads students through the basic steps in designing and conducting a research study. Topics include reviewing the literature, different approaches to data collection, managing and analyzing data, and reporting results.


**Style:** 100% Lecture

**Grading:** 15% mid-exam, 15% final exam, 70% reports/papers.

**Exam Format:** multiple choice
Description: This course is designed to provide an overview of introductory statistics. The topics to be covered in this course include graphing techniques, measures of center and spread, normal distributions, correlation, simple linear regression, sampling methods, experimental design, sampling distributions, and methods of statistical estimation and inference. Upon completion of this introductory course, students should be able to: (1) think critically about statistics used in popular magazines, newspapers, and journal articles, (2) apply the knowledge gained in the course to analyze simple statistical research data, and (3) design a research study, use a statistical software package to analyze the data generated from this research study, and appropriately report the conclusions of this research study. Because this version will be conducted entirely online, it is important for all students to keep up with required readings and assignments. Students are also expected to be active participants in this course. Active participation includes asking and answering questions in assigned discussion groups, posting responses to assignments and discussion questions in discussion groups, and responding to the messages posted by other members of the class. Students will also be expected to use SPSS. A student-version of SPSS will be sold with the textbook, but this student version runs on PCs, not on Macs. Any student who uses a Mac may need to complete SPSS work at a computer lab on campus. Contact the instructor before purchasing required materials at the bookstore for more options.

Style: 100% Web Based. Class involves a lot of discussion/small-group activities and independent learning activities.

Grading: 18% final exam, 4% reports/papers, 36% special projects, 27% quizzes, 15% written homework. Special projects include a class project and several small-group discussion assignments.

Exam Format: mostly short-answer questions

EPSY 5262 Intermediate Statistical Methods
3 credit(s); prereq 3264 or 5261 or equiv; Instructor: Everson, Michelle G
Description: This course continues where EPSY 5261 (Introductory Statistical Methods) ends. Together, these two courses provide an alternative to the sequence EPSY 8261-8262. It is assumed that students who are registered in EPSY 5262 have successfully completed EPSY 5261 or its equivalent. By the end of the course, students should be able to: (1) understand the basic ideas and types of experimental design and analysis of variance (ANOVA), (2) run and interpret analyses involving real data using SPSS statistical software, (3) decompose data based on different models, applying algebraic notation, (4) check assumptions for models and select appropriate models for data, and (5) complete an independent project where they design an experiment, gather data, analyze and interpret the data, and write up the results in a paper. The SPRING semester offering of the course is classroom-based and students who take this course will need access to SPSS software (beyond the student version used in EPSY 5261). Students who desire an online (or possibly hybrid) section of the course will need to take the course during fall semester.

Style: 100% Web Based. A large component of the course is discussion/small-group activities and independent learning activities.

Grading: 19% final exam, 38% special projects, 28% quizzes, 15% written homework. Special projects consist of a class project and several group discussion assignments.

Exam Format: Mostly short answer questions

EPSY 5281 Introduction to Computer Operations and Data Analysis in Education and Related Fields
3 credit(s); prereq Statistics course; Instructor: Davenport, Jr. Ernest C
Description: Student may contact the instructor or department for information.

EPSY 5415 Child and Adolescent Development and Counseling
A-F only, 4 credit(s); prereq Grad student or MEd student or K-12 (counseling endorsement or licensure) student; Instructor: Wahl, Kay Herting
Description: Student may contact the instructor or department for information.

EPSY 5604 Transition From School to Work and Community Living for Persons With Special Needs
3 credit(s);
Instructor: Peper, Christine R
Description: This course will emphasize the use and application of effective strategies and models for improving the transition of youth from school to work and community living for students aged 14-21. This will include course content that specifically addresses all phases of student assessment, individualized transition planning, parent, family and student involvement in designing post school options, use of appropriate community-based services (employment, residential living, social and recreational services, etc), and comprehensive interagency approaches for transition.

Style: 40% Lecture, 10% Film/Video, 30% Discussion, 10% Small Group Activities, 5% Student Presentation, 5% Guest Speakers.

EPSY 5609 Family-centered Services
A-F only, 2 credit(s);
Instructor: Watson, Christopher L
Description: Student may contact the instructor or department for information.

EPSY 5612 Understanding of Academic Disabilities
A-F only, 3 credit(s);
Instructor: Sefert Ph.D, Kathy
Description: Student may contact the instructor or department for information.

EPSY 5613 Foundations of Special Education I
A-F only, 3 credit(s); prereq Child development course, 5601 or equiv;
Instructor: Faustsch-Patridge, Terri
Description: Student may contact the instructor or department for information.

EPSY 5613 Foundations of Special Education I
A-F only, 3 credit(s); prereq Child development course, 5601 or equiv;
Instructor: Peper, Christine R
Description: Student may contact the instructor or department for information.

EPSY 5613 Foundations of Special Education I
A-F only, 3 credit(s); prereq Child development course, 5601 or equiv;
Instructor: Wing, Brad
Description: Student may contact the instructor or department for information.

EPSY 5616 Behavior Analysis and Classroom Management
3 credit(s);
Instructor: Faustsch-Patridge, Terri
Description: Student may contact the instructor or department for information.

EPSY 5624 Biomedical and Physical Aspects of Developmental Disabilities
A-F only, 2 credit(s);
Instructor: Azar, Judi Larson
Description: Student may contact the instructor or department for information.

EPSY 5636 Sensory Impairments of Learners With Intellectual Disabilities
2 credit(s); prereq 5613, 5614;
Instructor: Hupp, Susan Candi
Description: This course is designed to address characteristics and learning needs of students with developmental disabilities who also have visual and auditory disabilities. We explore the nature of visual and auditory disabilities; the design of
EPSY 5641 Foundations of Education for Individuals Who Are Deaf/Hard of Hearing
3 credit(s);
Instructor: Arnoldi,Kathleen A
Description: Student may contact the instructor or department for information.

EPSY 5644 Language Development and Programming for Deaf/Hard of Hearing Children
3 credit(s);
Instructor: Rose,Susan
Description: Student may contact the instructor or department for information.

EPSY 5647 Aural and Speech Programming for Persons Who Are Deaf/Hard of Hearing
3 credit(s);
Instructor: Paulson,Anna Regas
Description: Student may contact the instructor or department for information.

EPSY 5656 Social and Interpersonal Characteristics of Students with Disabilities
A-F only, 3 credit(s);
Instructor: STAFF
Description: The focus of this course is on the critical analysis of conceptual and practical issues regarding special education and students with emotional and behavioral disorders.
Style: 30% Lecture, 20% Discussion. Small group activities
Grading: 50% reports/papers, 30% quizzes, 5% in-class presentation, 15% class participation.

EPSY 5661 Introduction to Autism Spectrum Disorder
A-F only, 3 credit(s);
Instructor: Reichle,Joe E
Description: Student may contact the instructor or department for information.

EPSY 5702 Practicum in Autism Spectrum Disorder
A-F only, 3 credit(s); prereq 5616, 5661, 5609, one of [5622 or 5644 or SLHS 5606], enrolled in Autism Spectrum Disorder certificate program, instr consent
Instructor: Reichle,Joe E
Description: Student may contact the instructor or department for information.

EPSY 5703 Practicum in Applied Behavior Analysis
A-F only, 3 credit(s); prereq 5616, 5657, Psy 4011, Applied Behavior Analysis Certificate student, instr consent
Instructor: McComas,Jennifer
Description: Student may contact the instructor or department for information.

EPSY 5752 Student Teaching: Learning Disabilities
S-N only, 1-6 credit(s), max credits 10, 10 completions allowed; prereq instr consent
Instructor: Seifert PhD,Kathy
Description: A higher level of understanding of specific learning disabilities will be the focus of this course. The transfer of theoretical knowledge to practical application learned throughout the students' program will be examined. Understanding of the role of the learning strategies specialist in resource and inclusive settings for students of elementary and secondary age is essential. Student teaching provides an opportunity to demonstrate competencies in teaching students with developmental disabilities that are outlined by the Minnesota Department of Education Board of Teaching and the University of Minnesota as requirements for the teaching license.

EPSY 5754 Student Teaching: Social and Emotional Disabilities
A-F only, 1-6 credit(s), max credits 8, 8 completions allowed; prereq Completion of licensure courses for social and emotional disorders, instr consent
Instructor: Kelley,Mary Beth
Description: Student may contact the instructor or department for information.

EPSY 5755 Student Teaching: Developmental Disabilities, Mild/Moderate
A-F only, 1-6 credit(s), max credits 6; prereq Completion of all licensure coursework, instr consent
Instructor: Peper,Christine R
Description: The purpose of this two-semester sequence of Developmental Disabilities student teaching experiences is to provide student teachers with support and opportunities to demonstrate the following competencies from the MN Rules for Special Education: Developmental Disabilities. For a complete list of competencies addressed in this seminar, see attached Student Teaching Competencies for Licensure in Developmental Disabilities - Revised January 2004. a. To identify referral, assessment, planning, and placement procedures specific to teaching students with developmental disabilities. b. To use individual education program plans to design and implement appropriate instruction for students with developmental disabilities. c. To communicate and interact with students, families, colleagues, and the community to support student learning and well-being. d. To apply the standards of effective practice in teaching students with developmental disabilities through a variety of early and ongoing clinical experiences with kindergarten or primary, intermediate or middle level, and high school students across a range of service delivery models
Style: 25% Lecture, 75% Small Group Activities.

EPSY 5756 Student Teaching: Developmental Disabilities, Moderate/Severe
A-F only, 1-6 credit(s), max credits 6; prereq Completion of all licensure coursework, instr consent
Instructor: Peper,Christine R
Description: The purpose of this two-semester sequence of Developmental Disabilities student teaching experiences is to provide student teachers with support and opportunities to demonstrate the following competencies from the MN Rules for Special Education: Developmental Disabilities. For a complete list of competencies addressed in this seminar, see attached Student Teaching Competencies for Licensure in Developmental Disabilities - Revised January 2004. a. To identify referral, assessment, planning, and placement procedures specific to teaching students with developmental disabilities. b. To use individual education program plans to design and implement appropriate instruction for students with developmental disabilities. c. To communicate and interact with students, families, colleagues, and the community to support student learning and well-being. d. To apply the standards of effective practice in teaching students with developmental disabilities through a variety of early and ongoing clinical experiences with kindergarten or primary, intermediate or middle level, and high school students across a range of service delivery models
Style: 25% Lecture, 75% Small Group Activities.

EPSY 5761 Student Teaching in Early Childhood Special Education Settings for Children Aged Three to Five Years
S-N only, 3 credit(s), max credits 6; prereq Licensure candidate in Early Childhood/Early Childhood Licensure Program, completion of all other licensure requirements for ECSE, instr consent; completion of Birth-3 student teaching should be completed after age 3-5 student teaching when possible
Instructor: Paulson,Anna Regas
Description: Student teachers work closely with their cooperating teacher and University supervisor to
design/implement programming for children in classrooms. Course includes an on-line seminar with discussion, cooperative learning experiences.

**Style:** 25% Web Based, 75% Service Learning. Students will be required to participate in student teaching in the area schools for 20 hours/week.

**Grading:** Student evaluation will be based on formative assessment measures completed by the cooperating teacher and the University Supervisor. Additional evaluation will be based on seminar participation and course assignments.

**EPSY 5762 Student Teaching in Early Childhood Special Education for Children Aged Birth to Three Years**

**S-N only, 3 credit(s), max credits 6; prereq Licensure candidate in Early Childhood/Early Childhood Licensure Program, completion of all other licensure requirements for ECSE, instr consent; completion of Birth-3 student teaching should be completed after age 3-5 student teaching when possible;**

**Instructor:** Paulson, Anna Regas

**Description:** Student teachers work closely with cooperating teacher and University supervisor to design/implement programming for families with children aged birth-to-three in their homes. Course includes on-line seminar with discussion, cooperative learning experiences.

**Style:** 25% Web Based, 75% Service Learning. Students will be expected to participate in student teaching in the area home intervention programs for 20 hours/week.

**Grading:** Student evaluation will be based on formative assessment measures completed by the cooperating teacher and the University Supervisor. Additional evaluation will be based on seminar participation and course assignments.

**EPSY 5991 Independent Study in Educational Psychology**

A-F only, 1-8 credit(s), max credits 20, 20 completions allowed; prereq instr consent; Instructor: STAFF

**Description:** Student teaches work closely with cooperating teacher and University supervisor to design/implement programming for families with children aged birth to three years in their homes. Course includes on-line seminar with discussion, cooperative learning experiences.

**Instructor:** Varma, Keisha

**Description:** In this course, you will examine issues related to technology-enhanced instruction from a learning sciences perspective. We will look at how research in developmental, cognitive and educational psychology informs the way that technology-enhanced support is designed and implemented. We will read research papers concerned with the design and implementation of technology-based innovations. Throughout the semester, students will design and revise a curricular project that effectively integrates technology. Throughout the course, students will work collaboratively to reflect on issues of technology integration, learning and cognition. Each class meeting will include at least 1 hour of work in the computer lab.

**EPSY 8117 Writing Empirical Paper and Research/Grant Proposals in Education and Psychology**

3 credit(s); prereq instr consent; Instructor: Tennyson, Robert D

**Description:** Student may contact the instructor or department for information.

**EPSY 8215 Advanced Research Methodologies in Education**

3 credit(s); prereq 5221, 5247, 8261, 8262, instr consent; Instructor: Harwell, Michael R

**Description:** Student may contact the instructor or department for information.

**EPSY 8220 Special Topics: Seminar in Quantitative Methods**

Item Response Models: Theory and Applications 3 credit(s), max credits 15, 15 completions allowed; Instructor: McGuire, Leah Walker

**Description:** Student may contact the instructor or department for information.

**EPSY 8220 Special Topics: Seminar in Quantitative Methods**

1-6 credit(s), max credits 15, 15 completions allowed; Instructor: McGuire, Leah Walker

**Description:** Student may contact the instructor or department for information.

**EPSY 8261 Statistical Methods I: Probability and Inference**

3 credit(s); prereq 3264 or 5261 or equiv; Instructor: delMas, Robert Claude

**Description:** This is the first course of the Ph.D. level statistics sequence in Educational Psychology. Students are introduced to basic methods of data description and statistical analysis. The course is applied, meaning the emphasis is on conceptual understanding of the methods used in data analysis rather than on the mathematical bases of the methods. It is assumed that the student has a working knowledge of high school-level algebra. Topics covered: descriptive statistics, normal distribution, sampling distributions, one- and two-sample hypothesis tests, confidence intervals, one-way analysis of variance, a priori and post hoc tests, simple linear regression, contingency table analysis, and testing assumptions for all statistical models.

**EPSY 8261 Statistical Methods I: Probability and Inference**

3 credit(s); prereq 3264 or 5261 or equiv; Instructor: Zieffler, Andrew S

**Description:** Student may contact the instructor or department for information.

**EPSY 8262 Statistical Methods II: Regression and the General Linear Model**

3 credit(s); prereq [8260, 8261] or equiv; Instructor: Zieffler, Andrew S

**Description:** Student may contact the instructor or department for information.

**EPSY 8264 Advanced Multiple Regression Analysis**

3 credit(s); prereq 8261-8262, regression and ANOVA course, familiarity with a statistical analysis package; Instructor: Davenport Jr, Ernest C

**Description:** Student may contact the instructor or department for information.

**EPSY 8311 Education Sciences Proseminar**

A-F only, 1 credit(s), max credits 3, 3 completions allowed; prereq Doctoral student, instr consent; Instructor: Davison, Mark L

**Description:** Student may contact the instructor or department for information.

**EPSY 8402 Individual Counseling: Theory and Applications**

A-F only, 3 credit(s); prereq Grad ed psy major with CSPP subprog or instr consent; Instructor: Romano, John L

**Description:** Student may contact the instructor or department for information.

**EPSY 8406 Professional Ethics for Counselors and Psychologists**

A-F only, 3 credit(s); prereq CSPP grad student; Instructor: Burke, Caroline Anne

**Description:** Student may contact the instructor or department for information.

**EPSY 8412 Seminar: Advanced Counseling Theory and Ethics**

A-F only, 4 credit(s); prereq Ed psy PhD student with CSPP subprog or instr consent; Instructor: Skovholt, Thomas M

**Description:** Student may contact the instructor or department for information.

**EPSY 8436 Crisis Management and Consulting in School Counseling**

A-F only, 3 credit(s); prereq CSPP grad student in school counselor program or instr consent; Instructor: Wahl, Kay Herting

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EPSY 8452 Psychological Aspects of Counseling Supervision
Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class
This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online
Description: Student may contact the instructor or department for information.
Instructor: McComas,Jennifer
Prerequisite: Grad student or instr consent
Credit(s): A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required

EPSY 8851 Counseling Pre-Practicum
Description: Student may contact the instructor or department for information.
Instructor: Veach Ph.D.,LP, Patricia McCarthy
Prerequisite: [Grad student in counseling or instr consent]
Credit(s): A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required

EPSY 8503 Counseling Practicum I
Description: Student may contact the instructor or department for information.
Instructor: Skovholt, Thomas M
Prerequisite: EPSY 8502 or instr consent
Credit(s): A-F only, 1-4 credit(s); max credits 4, completion allowed; Dept consent required
A-F only, 1-4 credit(s); max credits 4, completion allowed; Dept consent required
A-F only, 1-4 credit(s); max credits 4, completion allowed; Dept consent required
A-F only, 1-4 credit(s); max credits 4, completion allowed; Dept consent required
A-F only, 1-4 credit(s); max credits 4, completion allowed; Dept consent required

EPSY 8509 Supervision Practicum: CSPP
Description: Student may contact the instructor or department for information.
Instructor: Veach Ph.D.,LP, Patricia McCarthy
Prerequisite: [Ed psy PhD student with CSPP subprog] or instr consent
Credit(s): 1-2 credit(s); max credits 5, completion allowed; Dept consent required
1-2 credit(s); max credits 5, completion allowed; Dept consent required
1-2 credit(s); max credits 5, completion allowed; Dept consent required
1-2 credit(s); max credits 5, completion allowed; Dept consent required
1-2 credit(s); max credits 5, completion allowed; Dept consent required

EPSY 8512 Internship: CSPP
Description: Student may contact the instructor or department for information.
Instructor: Turner, Sherri L
Prerequisite: EdPsy PhD student with CSPP subprog
Credit(s): S-N only, 1-12 credit(s); max credits 12, completion allowed; Dept consent required
S-N only, 1-12 credit(s); max credits 12, completion allowed; Dept consent required
S-N only, 1-12 credit(s); max credits 12, completion allowed; Dept consent required
S-N only, 1-12 credit(s); max credits 12, completion allowed; Dept consent required
S-N only, 1-12 credit(s); max credits 12, completion allowed; Dept consent required

EPSY 8522 Counseling Practicum: Advanced
Description: Student may contact the instructor or department for information.
Instructor: Burke, Caroline Anne
Prerequisite: [Grad EPsy PhD student with CSPP subprog] or instr consent
Credit(s): A-F only, 3 credit(s); max credits 4, completion allowed; Dept consent required after 2 repeats
A-F only, 3 credit(s); max credits 4, completion allowed; Dept consent required after 2 repeats
A-F only, 3 credit(s); max credits 4, completion allowed; Dept consent required after 2 repeats
A-F only, 3 credit(s); max credits 4, completion allowed; Dept consent required after 2 repeats
A-F only, 3 credit(s); max credits 4, completion allowed; Dept consent required after 2 repeats

EPSY 8701 Doctoral Core Seminar: Special Education I
Description: Student may contact the instructor or department for information.
Instructor: Jitendra, Asha
Prerequisite: Ed Psy PhD student with spec ed subprog or instr consent
Credit(s): A-F only, 3 credit(s); max credits 6, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 6, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 6, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 6, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 6, completion allowed; Dept consent required

EPSY 8707 Principles of Behavior Analysis and Learning
Description: Student may contact the instructor or department for information.
Instructor: McComas, Jennifer
Prerequisite: [Grad student, foundational course in [learning or psychology]] or instr consent
Credit(s): A-F only, 3 credit(s); max credits 6, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 6, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 6, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 6, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 6, completion allowed; Dept consent required

EPSY 8811 Assessment in School Psychology I: Foundations
Description: Student may contact the instructor or department for information.
Instructor: Christ, Theodore J
Prerequisite: Grad ed psy major with school psy subprog or instr consent
Credit(s): A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required
A-F only, 3 credit(s); max credits 3, completion allowed; Dept consent required

EE 1 Refresher Course for Electrical Engineers
Description: Find information about this course for engineering.
Instructor: Nordell, Daniel Edwin
Prerequisite: [EIT exam, pass EIT exam, four yrs elec eng experience]
Credit(s): A-F only, 0 credit(s); max credits 0, completion allowed; Dept consent required
A-F only, 0 credit(s); max credits 0, completion allowed; Dept consent required
A-F only, 0 credit(s); max credits 0, completion allowed; Dept consent required
A-F only, 0 credit(s); max credits 0, completion allowed; Dept consent required
A-F only, 0 credit(s); max credits 0, completion allowed; Dept consent required

Electrical and Computer Engineering
4-178 EE/CSci Building
This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
the discipline of Electrical Engineering. It is designed to aid the
electrical engineer in preparation for the PE examination by
presenting an organized review of material ordinarily contained
in a college electrical engineering curriculum. Primary emphasis
will be on problem solving with orientation as close as possible to
the type of questions contained in the exam. Prerequisites:
Completion of the Fundamentals of Engineering exam Electrical
Engineering or equivalent degree 4 years electrical engineering experience
Style: 75% Lecture, 25% Discussion.
Grading: 100% successful completion of the FE exam

EE 1 Refresher Course for Electrical Engineers
A-F only, 0 credit(s); prereq [BSEE or BEE], pass EIT exam, 
four yrs elect eng experience;
Instructor: Ernst,Thomas W
Description: This course is a review of electrical engineering fundamentals required to pass the National Council of
Engineering Examiners Principles and Practice Examination in the
discipline of Electrical Engineering. It is designed to aid the
electrical engineer in preparation for the PE examination by
presenting an organized review of material ordinarily contained
in a college electrical engineering curriculum. Primary emphasis
will be on problem solving with orientation as close as possible to
the type of questions contained in the exam. Prerequisites:
Completion of the Fundamentals of Engineering exam Electrical
Engineering or equivalent degree 4 years electrical engineering experience
Style: 75% Lecture, 25% Discussion.
Grading: 100% successful completion of the FE exam

EE 1301 Introduction to Computing Systems
4 credit(s); prereq MATH 1271 or MATH 1371;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

EE 2001 Introduction to Electronic and Electrical Circuits
3 credit(s); prereq Phys 1302, Concurrent registration is
required (or allowed) in is required in Math 2243, 2373, 2573;
Instructor: stadler,bethanie J. Hills
Description: Student may contact the instructor or department for information.

EE 2002 Introductory Circuits and Electronics Laboratory
1 credit(s); prereq 2001 or Concurrent registration is
required (or allowed) in 2001;
Instructor: Cohen,Philip I
Description: Student may contact the instructor or department for information.

EE 2006 Introductory Circuits Laboratory
0.5 credit(s);
Instructor: Cohen,Philip I
Description: Student may contact the instructor or department for information.

EE 2011 Linear Systems and Circuits
3 credit(s); prereq 2001;
Instructor: imbertson,Paul Jay
Description: Student may contact the instructor or department for information.

EE 2101 Introduction to Electronics I
1.5 credit(s); prereq Linear circuits;
Instructor: Cohen,Philip I
Description: Student may contact the instructor or department for information.

EE 2103 Introduction to Electronics II
1 credit(s); prereq 2001 or 2101;
Instructor: Cohen,Philip I
Description: Student may contact the instructor or department for information.

EE 2301 Introduction to Digital System Design
4 credit(s); prereq MATH 1272 or MATH 1372 or MATH 1572;
Instructor: cherkasky,vladimir S
Description: Student may contact the instructor or department for information.

EE 2301 Introduction to Digital System Design
4 credit(s); prereq MATH 1272 or MATH 1372 or MATH 1572;
Instructor: cherkasky,vladimir S
Description: Student may contact the instructor or department for information.

EE 2301 Introduction to Digital System Design
4 credit(s); prereq MATH 1272 or MATH 1372 or MATH 1572;
Instructor: kinney,larry L
Description: Student may contact the instructor or department for information.

EE 2301 Introduction to Digital System Design
4 credit(s); prereq MATH 1272 or MATH 1372 or MATH 1572;
Instructor: kinney,larry L
Description: Student may contact the instructor or department for information.

EE 2301 Introduction to Digital System Design
4 credit(s); prereq MATH 1272 or MATH 1372 or MATH 1572;
Instructor: kinney,larry L
Description: Student may contact the instructor or department for information.

EE 2301 Introduction to Digital System Design
4 credit(s); prereq MATH 1272 or MATH 1372 or MATH 1572;
Instructor: kinney,larry L
Description: Student may contact the instructor or department for information.

EE 3005 Fundamentals of Electrical Engineering
4 credit(s); prereq Math 2243, Phys 1302; not for EE majors;
Instructor: Higman,Ted King
Description: Student may contact the instructor or department for information.

EE 3006 Fundamentals of Electrical Engineering Laboratory
1 credit(s); prereq Concurrent enrollment in 3005 is allowed
but not required;
Instructor: Higman,Ted King
Description: Student may contact the instructor or department for information.

EE 3015 Signals and Systems
3 credit(s); prereq [2011, CSE] or dept consent ;
Instructor: Leger,James Robert
Description: Student may contact the instructor or department for information.

EE 3025 Statistical Methods in Electrical and Computer
Engineering
3 credit(s); prereq [3015, CSE] or instr approval;
Instructor: Parhi,Keshab K.
Description: Student may contact the instructor or department for information.

EE 3041 Industrial Assignment I
A-F only, 2 credit(s); prereq [EE or CompE upper div],
enrolled in ECE co-op program;
Instructor: Higman,Ted King
Description: Student may contact the instructor or department for information.

EE 3101 Circuits and Electronics Laboratory I
2 credit(s); prereq [2002, [3115 or Concurrent registration is required (or allowed) in 3115], CSE] or dept consent;
Instructor: Ernie,Douglas
Description: Student may contact the instructor or department for information.

EE 3102 Circuits and Electronics Laboratory II
2 credit(s); prereq [3101 or CSE or dept consent], attendance first day of class;
Instructor: Robbins,William P
Description: Student may contact the instructor or department for information.

EE 3115 Analog and Digital Electronics
4 credit(s); prereq [3015 or Concurrent registration is required (or allowed) in 3015, IT] or dept consent;
Instructor: Robbins,William P
Description: Student may contact the instructor or department for information.

EE 3161 Semiconductor Devices
3 credit(s); prereq Upper div CSE, 2011, Phys 1302, Phys 2303 or Chem 1022;
Instructor: Koester,Steven J
Description: Student may contact the instructor or department for information.

EE 3601 Transmission Lines, Fields, and Waves
3 credit(s); prereq [2011, [Math 2243 or Math 2373 or Math 2573], [Phys 1302 or Phys 1402], CSE] or dept consent;
Instructor: Gopinath,Anand
Description: Student may contact the instructor or department for information.

EE 3601 Transmission Lines, Fields, and Waves
3 credit(s); prereq [2011, [Math 2243 or Math 2373 or Math 2573], [Phys 1302 or Phys 1402], CSE] or dept consent;
Instructor: Franklin,Rhonda R.
Description: Student may contact the instructor or department for information.

EE 3940 Special Topics in Electrical and Computer Engineering
1-4 credit(s), max credits 8; prereq instr consent;
Instructor: STAFF
Description: Graduating with an engineering degree is the foundation for starting your career but you will be required to have other fundamental skills in order to successfully transition into the highly dynamic environment of industry. This class provides an overview and training of some of the other key elements you will need to learn in order to have a successful and rewarding engineering career. The course contains three parts. Part 1 Successful Transition to Industry- An overview is shared on how to successfully transition into industry and hit the ground running. Starting with resumes, portfolios and interviewing. How to impress interviewers and get a job offer. Once hired - how to excel your first year on the job. Part 2 Organizational Dynamics and Your Career- (3 Lectures) Discussion and outline on the impact of working for a small or large company as well as team and company structures and how they work including various methods companies employ for product development and personnel advancement are revealed. Work book exercises include; Development of a Career Plan- which is vital to long term career success. Also learning to identify what long term goals are necessary, how they fit into your plan and their importance in the beginning and throughout your career to assist in lifelong career advancement. Part 3 Company Team Dynamics- (3 Lectures) Industry structure is mostly made of teams, learn the essentials of how to function in a team environment. What it takes to be a team player, how to deal with failure and difficult team members and supervisors. Lectures: September 14, 28, October 12, 26, November 9, 23, December 7

EE 3990 Curricular Practical Training
S-N only, 1 credit(s), max credits 2; prereq instr consent, undergrad EE or CompE major;
Instructor: Kinney,Larry L
Description: Student may contact the instructor or department for information.

EE 4043W Industrial Assignment II
A-F only, 4 credit(s); prereq 3041; Meets CLE req of Writing Intensive;
Instructor: Higman,Ted King
Description: Student may contact the instructor or department for information.

EE 4044 Industrial Assignment III
A-F only, 2 credit(s); prereq 4043W;
Instructor: Higman,Ted King
Description: Student may contact the instructor or department for information.

EE 4231 Linear Control Systems: Designed by Input/Output Methods
3 credit(s); prereq [3015, [upper div CSE or grad student in CSE major]] or instr consent;
Instructor: Georgiou,Tryphon T
Description: Student may contact the instructor or department for information.

EE 4235 Linear Control Systems Laboratory
1 credit(s); prereq 4231 or Concurrent registration is required (or allowed) in 4231;
Instructor: Georgiou,Tryphon T
Description: Lab to accompany 4231

EE 4301 Digital Design With Programmable Logic
4 credit(s); prereq 2301, [1301 or CSCI 1113 or CSCI 1901];
Instructor: Posbergh,Thomas Alfred
Description: Student may contact the instructor or department for information.

EE 4363 Computer Architecture and Machine Organization
4 credit(s); prereq 2361 credit will not be granted if credit received for: 5361, CSci 5201;
Instructor: Posbergh,Thomas Alfred
Description: Student may contact the instructor or department for information.

EE 4389W Introduction to Predictive Learning
3 credit(s); prereq [3025, ECE student] or STAT 3022;
Instructor: Cherkassky,Vladimir S
Description: EE 4389W SPRING 2008 INTRODUCTION to EMPIRICAL INFERENCE and SOFT COMPUTING Instructor Vladimir Cherkassky EE/CSci 6-111; 612-625-9597;
cherkass@ece.umn.edu Office Hours: Tue Thu - 11:15-12 and Thur 3 ? 4 pm Lecture time and place Tue Thu, 9:45 to 11.00am, Amundh 156 Prerequisites EE 3025 for ECE students, or Stat 3022 for non-ECE majors. ? Working knowledge of concepts in probability theory (i.e., random variable, distribution, mean and st. deviation). Familiarity with computer programming using computer system of your choice for homework assignments. MATLAB or similar environment is recommended for ECE students; Meets CLE req of Writing Intensive;

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.

167
This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
Instructor: Campbell, Stephen A  
Description: Student may contact the instructor or department for information.

EE 5181 Introduction to Nanotechnology  
4 credit(s); prereq [3161, 3601, CSE grad student] or dept consent  
Instructor: Jacobs, Heinrich Otto Heiko  
Description: Student may contact the instructor or department for information.

EE 5231 Linear Systems and Optimal Control  
3 credit(s); prereq [3015, CSE grad student] or instr consent  
Instructor: Jovanovic, Mihailo  
Description: Student may contact the instructor or department for information.

EE 5251 Optimal Filtering and Estimation  
3 credit(s); prereq [[MATH 2243, STAT 3021] or equiv], CSE grad student] or dept consent ; 3025, 4231 recommended; Credit will not be granted if credit has been received for: AEM 5451;  
Instructor: Georgiou, Tryphon T  
Description: Student may contact the instructor or department for information.

EE 5301 VLSI Design Automation I  
3 credit(s); prereq [2301, CSE grad student] or dept consent  
Instructor: Sapatnekar, Sachin Suresh  
Description: Student may contact the instructor or department for information.

EE 5323 VLSI Design I  
3 credit(s); prereq [2301, 3115, CSE grad student] or dept consent  
Instructor: Kim, Chris H.  
Description: Student may contact the instructor or department for information.

EE 5333 Analog Integrated Circuit Design  
3 credit(s); prereq [3115, CSE grad student] or dept consent  
Instructor: Harjani, Ramesh  
Description: Fundamental circuits for analog signal processing. Design issues associated with MOS/BJT devices. Design/testing of circuits. Selected topics (e.g., modeling of basic IC components, design of operational amplifier or comparator or analog sampled-data circuit.

EE 5364 Advanced Computer Architecture  
3 credit(s); prereq [[4363 or CSci 4203], CSE grad student] or dept consent credit will not be granted if credit received for: 8365, CSci 8203;  
Instructor: Zhai, Antonia Bingheng  
Description: Student may contact the instructor or department for information.

EE 5371 Computer Systems Performance Measurement and Evaluation  
3 credit(s); prereq [[4364 or 5361 or CSci 4203 or 5201], CSE grad student] or dept consent ; Credit will not be granted if credit has been received for: EE 5863;  
Instructor: Li, Mo  
Description: The primary objective of this course is to teach computer designers and users the techniques for modeling computer systems and measuring their performance. These techniques are critical for evaluating new computer designs and for comparing existing systems. This course will concentrate on empirical, hands-on performance evaluation techniques using simulations and measurements of existing systems. An important aspect of this modeling and analysis is the presentation of measured data. In addition, the course will develop an understanding of how to use measured data to compare computer systems, and to determine how much a new architectural feature improves system performance. Course Objectives: Learn to use appropriate statistical techniques to compare systems and interpret measured data. Learn how to develop and apply measurement tools and techniques. Learn how to use analytical modeling. Learn how to appropriately design experiments. Learn how to develop and use various types of simulations. Learn to choose an appropriate performance evaluation technique.  
Style: 95% Lecture, 5% Student Presentation.  
Grading: 40% reports/papers, 25% quizzes, 25% written homework, 10% in-class presentation.

EE 5501 Digital Communication  
3 credit(s); prereq [3025, 4501, CSE grad student] or dept consent  
Instructor: Giannakis, Georgios B  
Description:  
Style: 5% Lecture.  
Grading: 35% mid exam, 45% final exam, 10% special projects, 10% problem solving homework  
Exam Format: problem solving

EE 5501 Digital Communication  
3 credit(s); prereq [3025, 4501, CSE grad student] or dept consent  
Instructor: Kim, Seung Jun  
Description: Student may contact the instructor or department for information.

EE 5531 Probability and Stochastic Processes  
3 credit(s); prereq [3025, CSE grad student] or dept consent  
Instructor: Luo, Zhi-Quan  
Description: Student may contact the instructor or department for information.

EE 5531 Probability and Stochastic Processes  
3 credit(s); prereq [3025, CSE grad student] or dept consent  
Instructor: Haupt, Jarvis David  
Description: Student may contact the instructor or department for information.

EE 5581 Information Theory and Coding  
3 credit(s); prereq [5531, CSE grad student] or dept consent  
Instructor: Jindal, Nihar  
Description: Student may contact the instructor or department for information.

EE 5602 RF/Microwave Circuit Design  
3 credit(s); prereq [5601 or equiv], [CSE grad student or instr consent ];  
Instructor: Franklin, Rhonda R.  
Description: Student may contact the instructor or department for information.

EE 5624 Optical Electronics  
4 credit(s); prereq [[3601 or Phys 3002], CSE grad student] or dept consent  
Instructor: Li, Mo  
Description: Student may contact the instructor or department for information.

EE 5653 Physical Principles of Magnetic Materials  
3 credit(s); prereq CSE grad student or dept consent  
Instructor: Victora, Randall H  
Description: Physics of para-magnetism, ferro-magnetism, antiferro-magnetism, ferrimagnetism, and associated ferromagnetic phenomena; static and dynamic theory of micromagnetics, magneto-optics, magnetization dynamics and magnetic material applications. Target audience is graduate students in a variety of fields, including electrical engineering, physics and materials science.  
Style: 100% Lecture.  
Grading: 15% mid exam, 30% final exam, 15% reports/papers.
EE 5657W Physical Principles of Thin Film Technology
4 credit(s); prereq CSE grad student or dept consent ; Meets CLE req of Writing Intensive;
Instructor: Stadler,Bethanie J. Hills
Description: This course covers the fabrication, characterization, and modern applications of thin films and nanostructures. Fabrication topics include vacuum technology, physical and chemical vapor deposition (CVD), and electrochemical deposition. The properties of resulting films are compared to each other and to bulk materials. Characterization techniques are reviewed. Finally, engineering the properties of films and nanostructures for applications in microfluidics, plasmonics, integrated photonics, nanoelectromechanical systems (NEMS), and nanoelectronics is important for optimized device performance. Therefore applications are the final topic taught and discussed as a summary of the course. A hands-on, team-based laboratory gives students experience with the fabrication techniques. The lab also exposes students to the facilities around campus so they will have a practical knowledge of specialized characterization. Each student completes a literature review, gives a presentation, and does a team lab report, all of which can be used towards the MSEE Plan C.
Style: 60% Lecture, 40% Laboratory. Laboratory times may need to vary from course guide times depending on schedule of teaching assistant.
Grading: 15% reports/papers, 40% written homework, 5% in-class presentation, 40% laboratory evaluation. Class work is individually graded, including a literature review project on topic of students choice. Laboratory is half individually graded and half a team grade.

EE 5904 Special Topics in Electrical Engineering I
1-4 credit(s), max credits 12, 3 completions allowed;
Instructor: Mohan,Ned
Description: Student may contact the instructor or department for information.

EE 5904 Special Topics in Electrical Engineering I
1-4 credit(s), max credits 12, 3 completions allowed;
Instructor: Talghader,Joseph John
Description: Student may contact the instructor or department for information.

EE 5904 Special Topics in Electrical Engineering I
1-4 credit(s), max credits 12, 3 completions allowed;
Instructor: Davis,Gary Arnold
Description: Student may contact the instructor or department for information.

EE 5950 Special Topics in Electrical Engineering II
1-4 credit(s), max credits 12, 3 completions allowed;
Instructor: Parhi,Keshab K.
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Imberton,Paul Jay
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Sapatnekar,Sachin Suresh
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Ottesen,Hal
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Tewfik,Ahmed Hossm
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Sapiro,Guillermo R
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Moon,Jaekyun
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Wollenberg,Bruce F
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Posbergh,Thomas Alfred
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Papanikolopoulos,Nikolaos P
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Hubel,Allison
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Cherkassky,Vladimir S
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Campbell,Stephen A
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Stadler,Bethanie J. Hills
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Franklin,Rhonda R.
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Sobelman,Gerald Edward
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Leger,James Robert
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Kieffer,John C
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Hubel,Allison
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Sobelman,Gerald Edward
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Leger,James Robert
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Kieffer,John C
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Hubel,Allison
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Sobelman,Gerald Edward
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Leger,James Robert
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Kieffer,John C
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Hubel,Allison
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Sobelman,Gerald Edward
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Leger,James Robert
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Kieffer,John C
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent ;
Instructor: Hubel,Allison
Description: Student may contact the instructor or department for information.
for information.

EE 5990 Curricular Practical Training
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S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Giannakis, Georgios B
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
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S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: He, Tian
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
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S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Bazargan, Kia
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
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S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Roychowdhury, Jaijeet
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
---
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Jacobs, Heinrich Otto Heiko
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
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S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Roumeliotis, Stergios
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
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S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Wang, Jianping
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
---
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Amin, Massoud
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
---
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Luo, Zhi-Quan
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
---
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: He, Bin
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
---
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Jindal, Nihar
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
---
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Kim, Chris H.
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
---
S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Jovanovic, Mihailo
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
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S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Riedel, Marc
Description: Student may contact the instructor or department for information.

EE 5990 Curricular Practical Training
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S-N only, 1-2 credit(s), max credits 6, 3 completions allowed;
prereq Grad student, instr consent;
Instructor: Oh, Sang-Hyun
Description: Student may contact the instructor or department for information.

EE 8235 Advanced Control Topics
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3 credit(s);
Instructor: Jovanovic, Mihailo
Description: Student may contact the instructor or department for information.

EE 8500 Seminar: Communications
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S-N only, 1 credit(s), max credits 3, 3 completions allowed;
Instructor: Giannakis, Georgios B
Description: Student may contact the instructor or department for information.

EE 8591 Predictive Learning from Data
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3 credit(s); prereq CSE grad student or instr consent;
Instructor: Cherkassky, Vladimir S
Description: COURSE DESCRIPTION: Methods for estimating dependencies from data have been traditionally explored in such diverse fields as: Statistics (multivariate regression and classification), Engineering (pattern recognition, system identification) and Computer Science (artificial intelligence, machine learning, data mining). Recent interest in learning methods triggered by the widespread use of computers and database technology has resulted in the development of biologically motivated methodologies, such as (artificial) neural networks, fuzzy systems and wavelets. Unfortunately, developments in each field are seldom related to other fields. Many data mining application lead to predictive learning methods, where available (historical) data is used to estimate models with high generalization capability (i.e., models capable of prediction or decision making with new data). This course will first provide general conceptual framework for learning dependencies from data, and then discuss predictive learning methods developed in statistics, pattern recognition and machine learning. COURSE PROJECTS: Each student is expected to complete a project (of research nature). A list of project topics will be distributed during 2-d week of class. Students will receive close supervision and feedback on their projects from the

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instructor. Students may propose their own project topic, subject to the instructor's approval. During the last week of class, students will give a short (~15 min) oral presentation of their project. TEXTBOOK: Learning from Data, by V. Cherkassky and F. Muller, Second Edition, Wiley-Interscience

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Imbertson, Paul Jay
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Ernie, Douglas
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Mounes-Toussi, Farnaz
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Rennonet, Charles Leon
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Ottesen, Hal
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Zhang, Zhi-Li
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Gopinath, Anand
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Tewfik, Ahmed Hossam
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Sapiro, Guillermo R
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Sapatnekar, Sachin Suresh
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Moon, Jaekyun
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Wollenberg, Bruce F
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Posbergh, Thomas Alfred
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Parhi, Keshab K.
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Harjani, Ramesh
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prerequisite 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Cohen, Philip I
Description: Student may contact the instructor or department for information.

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Instructor: Ruden, P. Paul
Description: Student may contact the instructor or department for information.

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Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
EE 8940 Special Investigations

1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Holte, James Edward
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations

1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Cherkassky, Vladimir S
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations

1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Talghader, Joseph John
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations

1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Wagh, Mostafa
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations

1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Robbins, William P
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations

1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Hubel, Allison
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations

1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Kieffer, John C
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations

1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Mokhtar, Gerald Edward
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations

1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3 cr [may be repeated for cr]; IT grad student or instr consent

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EE 8940 Special Investigations

1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Ebbini, Emad S
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations

1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Leger, James Robert
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations

1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3 cr [may be repeated for cr]; IT grad student or instr consent

Instructor: Giannakis, Georgios B
Description: Student may contact the instructor or department for information.
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Bazargan,Kia
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Roychowdhury,Jaiejiet
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Jacobs,Heinrich Otto Heiko
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Roumeliotis, Stergios
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Wang, Jianping
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Amin, Massoud
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Luo, Zhi-Quan
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Instructor: He, Bin
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1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Jindal, Nihar
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Kim, Chris H.
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Jovanovic, Mihailo
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Riedel, Marc
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Oh, Sang-Hyun
Description: Student may contact the instructor or department for information.

EE 8940 Special Investigations
1-3 credit(s), max credits 3, 1 completion allowed; prereq 1-3

Instructor: Yoon, Euisik
Description: Student may contact the instructor or department for information.

EE 8950 Advanced Topics in Electrical and Computer Engineering
1-3 credit(s), max credits 12, 4 completions allowed; prereq
Cr ar [may be repeated for cr]; instr consent;
Instructor: Sapiro, Guillermo R
Description: Student may contact the instructor or department for information.

EE 8950 Advanced Topics in Electrical and Computer Engineering
1-3 credit(s), max credits 12, 4 completions allowed; prereq
Cr ar [may be repeated for cr]; instr consent;
Instructor: Sainati, Robert A
Description: Student may contact the instructor or department for information.

EE 8950 Advanced Topics in Electrical and Computer Engineering
1-3 credit(s), max credits 12, 4 completions allowed; prereq
Cr ar [may be repeated for cr]; instr consent;
Instructor: Imbertson, Paul Jay
Description: Student may contact the instructor or department for information.

EE 8965 Plan C Project I
3 credit(s); prereq Grad EE major;
Instructor: Imbertson, Paul Jay
Description: Student may contact the instructor or department for information.
3 credit(s); prereq Grad EE major;
Instructor: Ernie, Douglas
Description: Student may contact the instructor or department for information.

EE 8965 Plan C Project I
3 credit(s); prereq Grad EE major;
Instructor: Mounes-Toussi, Farnaz
Description: Student may contact the instructor or department for information.

EE 8965 Plan C Project I
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3 credit(s); prereq Grad EE major;
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EE 8965 Plan C Project I
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Instructor: Ruden, P. Paul
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EE 8965 Plan C Project I
3 credit(s); prereq Grad EE major;
Instructor: Georgiou, Tryphon T
Description: Student may contact the instructor or department for information.

EE 8965 Plan C Project I
3 credit(s); prereq Grad EE major;
Instructor: Stadler, Bethanie J. Hills
Description: Student may contact the instructor or department for information.

EE 8965 Plan C Project I
3 credit(s); prereq Grad EE major;
Instructor: Higman, Ted King
Description: Student may contact the instructor or department for information.

EE 8965 Plan C Project I
3 credit(s); prereq Grad EE major;
Instructor: Kaveh, Mostafa
Description: Student may contact the instructor or department for information.

EE 8965 Plan C Project I
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Instructor: Lilja, David J
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EE 8965 Plan C Project I
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EE 8965 Plan C Project I
3 credit(s); prereq Grad EE major;
Instructor: Zhai, Antonia Bingheng
Description: Student may contact the instructor or department for information.

EE 8965 Plan C Project I
3 credit(s); prereq Grad EE major;
Instructor: Hardwick, Steven R.
Description: Student may contact the instructor or department for information.

EE 8965 Plan C Project I
3 credit(s); prereq Grad EE major;
Instructor: Amin, Massoud
Description: Student may contact the instructor or department for information.
EE 8967 Plan C Project II
3 credit(s); prereq Grad EE major;
Instructor: Isler,Ibrahim Volkan
Description: Student may contact the instructor or department for information.

EE 8967 Plan C Project II
1-3 credit(s), max credits 3, 1 completion allowed; prereq EE grad student;
Instructor: Imbertson,Paul Jay
Description: Student may contact the instructor or department for information.

EE 8967 Plan C Project II
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Instructor: Ernie,Douglas
Description: Student may contact the instructor or department for information.

EE 8967 Plan C Project II
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Instructor: Moulines-Toussi,Farnaz
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Instructor: Luo,Zhi-Quan
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EE 8967 Plan C Project II
1-3 credit(s), max credits 3, 1 completion allowed; prereq EE grad student;
Instructor: salapaka,murti v
Description: Student may contact the instructor or department for information.

EE 8970 Graduate Seminar I
S-N only, 1 credit(s), max credits 3, 3 completions allowed;
prereq Grad student;
Instructor: Ruden,P Paul
Description: Student may contact the instructor or department for information.

EHS 3112 First Responder for Coaches and Athletic Trainers
A-F only, 3 credit(s); prereq Jr or sr;
Instructor: Mc Neil MA,Mary Ann
Description: This nationally recognized curriculum is taught according to the standards of the Department of Transportation (USDOT). It is presented in an interactive and small group format to prepare students to work at the level of First Responder, the first level in the EMS chain of emergency care delivery. Certification includes: AHA-BLS for Health Care Providers and USDOT First Responder. Includes: Patient assessment, airway management, trauma care and critical thinking.
Style: 30% Lecture, 5% Film/Video, 30% Laboratory, 30% Small Group Activities, 5% Guest Speakers. This course is scenario based learning. Every class will contain 1/2 didactic presentations, 1/2 activities.
Grading: 20% final exam, 20% quizzes, 10% in-class presentation, 25% class participation, 25% laboratory evaluation. Student may not miss >3 class sessions. This will result in dismissal from the course.
Exam Format: Combination written/practical skills demonstration.

EHS 3112 First Responder for Coaches and Athletic Trainers
A-F only, 3 credit(s); prereq Jr or sr;
Instructor: Alberti,Laszlo S
Description: This nationally recognized curriculum is taught according to the standards of the Department of Transportation (USDOT). It is presented in an interactive and small group format to prepare students to work at the level of First Responder, the first level in the EMS chain of emergency care delivery. Certification includes: AHA-BLS for Health Care Providers and USDOT First Responder. Includes: Patient assessment, airway management, trauma care and critical thinking.
Style: 30% Lecture, 5% Film/Video, 30% Laboratory, 30% Small Group Activities, 5% Guest Speakers. This course is scenario based learning. Every class will contain 1/2 didactic presentations, 1/2 activities.
Grading: 20% final exam, 20% quizzes, 10% in-class presentation, 25% class participation, 25% laboratory evaluation. Student may not miss >3 class sessions. This will result in dismissal from the course.
Exam Format: Combination written/practical skills demonstration.

EHS 3312 Emergency Medical Technician
A-F only, 6 credit(s); prereq Jr or sr;
Instructor: Mc Neil MA,Mary Ann
Description: Successful completion of this course will make student eligible to take the National Registry for EMT/ NR EMT test. Knowledge and practical experience to make competent decisions regarding treatment of medical and trauma patients at the basic life support level, as set forth by the Department of Transportation. Includes: patient assessment; airway management; AHA basic life support for health professionals; trauma management; medical emergencies management; mass casualty and bio-terrorism response, critical thinking and decision-making.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>END 5305</td>
<td>Advanced Clinical Endodontics</td>
<td>1-6</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>END 5306</td>
<td>Review of Cases</td>
<td>1</td>
<td>Student may contact the instructor or department for information.</td>
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<td>END 5320</td>
<td>Advanced Endodontic Lecture</td>
<td>1-2</td>
<td>Student may contact the instructor or department for information.</td>
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<tr>
<td>ESL 110</td>
<td>Beginning Grammar</td>
<td>0</td>
<td>Student may contact the instructor or department for information.</td>
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**Endodontics 15-209 MoosT**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EHS 3312</td>
<td>Emergency Medical Technician</td>
<td>A-F</td>
<td>Successful completion of this course will make student eligible to take the National Registry for EMT(NREMT) test. Knowledge and practical experience to make competent decisions regarding treatment of medical and trauma patients at the basic life support level, as set forth by the Department of Transportation. Includes: patient assessment; airway management; AHA basic life support for health professionals; trauma management; medical emergencies management; mass casualty and bio-terrorism response, critical thinking and decision-making.</td>
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<tr>
<td>END 5312</td>
<td>Advanced Endodontic Emergency</td>
<td>S-N</td>
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<tr>
<td>END 5315</td>
<td>Advanced Endodontic Emergency</td>
<td>S-N</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>END 5329</td>
<td>Review of Cases</td>
<td>A-F</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>END 5331</td>
<td>Review of Cases</td>
<td>A-F</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>END 8001</td>
<td>Research in Endodontics</td>
<td>1-2</td>
<td>Successful completion of this course will make student eligible to take the National Registry for EMT(NREMT) test. Knowledge and practical experience to make competent decisions regarding treatment of medical and trauma patients at the basic life support level, as set forth by the Department of Transportation. Includes: patient assessment; airway management; AHA basic life support for health professionals; trauma management; medical emergencies management; mass casualty and bio-terrorism response, critical thinking and decision-making.</td>
</tr>
<tr>
<td>END 8310</td>
<td>Literature Review</td>
<td>A-F</td>
<td>Student may contact the instructor or department for information.</td>
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<tr>
<td>END 8312</td>
<td>Literature Review</td>
<td>A-F</td>
<td>Student may contact the instructor or department for information.</td>
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</tbody>
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**English as a Second Language 101 Wesbrook Hall**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ESL 110</td>
<td>Beginning Grammar</td>
<td>S-N</td>
<td>Student may contact the instructor or department for information.</td>
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</table>

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
ESL 120 Beginning Reading and Composition
S-N only, 0 credit(s), 4 completions allowed; prereq Nonnative English speaker;
Instructor: STAFF
Description: In this level 1 intensive reading and writing course for non-native speakers of English, students will improve reading comprehension by using strategies to identify the topic, main idea and details of selected academic and general interest texts. Students will also choose books of interest to read for pleasure. In addition, students will develop informal and formal writing skills by writing weekly journal entries and four to five multi-draft papers of one or more paragraphs. In writing, students will work on developing content and organization as well as grammatical accuracy. Discussion and vocabulary development are included.
Exam Format: Short answer

ESL 130 High Beginning Oral Skills
S-N only, 0 credit(s), 3 completions allowed; prereq Non-native speaker of English;
Instructor: STAFF
Description: The course focuses primarily on listening and speaking, with some reading, writing, and grammar. The text, which emphasizes high-frequency vocabulary and sentence patterns as they are used in real-life situations. Students will practice skills such as starting and maintaining a conversation and using ¿qué? questions to check information. The course will emphasize the active use of language, as students share information with classmates, using new skills and vocabulary.

ESL 210 Intermediate Grammar
S-N only, 0 credit(s), 4 completions allowed; prereq Non-native speaker of English;
Instructor: STAFF
Description: The course helps students build on their skills in basic grammar, adding to their range and accuracy at the paragraph level. Topics are likely to include the present perfect tense, gerunds and infinitives, modals, and comparative and superlative forms. Students study the use of word forms and grammatical structures in readings and conversations, practice in controlled speaking and writing assignments, and communicate with their classmates and teacher about topics of interest.

ESL 220 Intermediate Reading and Composition
S-N only, 0 credit(s), 4 completions allowed; prereq Nonnative English speaker;
Instructor: STAFF
Description: The purpose of this level 2 course is to help non-native speakers of English improve reading and writing skills in English. Students will read academic and non-academic texts about a variety of topics. Students will practice effective reading strategies as they read and discuss in class, and they will improve writing proficiency and strengthen grammar and vocabulary skills. In writing, students will work on topic sentences, paragraph and essay development and improving their accuracy in written English through informal writing, such as journals, and in more formal academic writing of multi-draft papers.

ESL 230 Intermediate Oral Skills
S-N only, 0 credit(s), 4 completions allowed; prereq Nonnative English speaker;
Instructor: STAFF
Description: The text is organized around broad themes like global business, art, states of consciousness, and addictive substances. The course emphasizes listening and speaking equally, and the two skills are integrated: students will talk about what they have listened to. In listening, students work on broad
ESL 921 Academic Writing
S-N only, 0 credit(s), 3 completions allowed; prereq Non-native speaker of English;
Instructor: STAFF
Description: ESL 781 is a course for non-native speakers of English that teaches students how to recognize and use different patterns of development in writing (such as narration, exemplification, and cause and effect) to deepen and extend ideas in various types of academic writing tasks. Guided textual analyses of readings are used to stimulate classroom discussions of shared topics and to support developing writing skills through close observation of rhetorical strategies employed by accomplished writers. Typical assignments include argumentative essays, reviews or opinion essays, short research papers, and possible independent assignments based on the specific needs of individual students.

ESL 931 Academic Speaking
S-N only, 0 credit(s), 3 completions allowed; prereq Non-native speaker of English;
Instructor: STAFF
Description: An advanced course for non-native speakers who want to improve their communication skills for social, academic and professional purposes; emphasis is on listening and speaking; content is drawn from the mass media.
Style: 25% Lecture, 45% Discussion. Small group work
Grading: 10% mid exam, 10% final exam, 25% special projects, 25% in-class presentation, 25% class participation, 5% laboratory evaluation
Exam Format: Variety

ESL 3001 Integrated Skills for Academic English
2 credit(s), max credits 4; prereq Non-native speaker of English;
Instructor: STAFF
Description: This course will help non-native English speaking students in degree programs polish their English skills in order to be successful in university level classes. Topics will cover the English language needed to interact within university setting, academic life, student/instructor roles, communicating by email, classroom interactions, discussion/panel presentation skills.

ESL 3101 Advanced English Grammar
4 credit(s), max credits 8; prereq dept consent, non-native speaker of English, [C-TOEFL score 153-187 or equiv], ESL program consent;
Instructor: STAFF
Description: This course for academic credit is designed for students already enrolled in degree programs at the University of Minnesota to work on polishing their English skills. Students review and solidify their understanding and control of English grammar in writing and speaking. The focus is on grammar in context at the multi-paragraph level. Topics include verb tenses, noun clauses, the passive voice, conditionals, and adjective clauses. This knowledge is applied to development of revision and editing skills in the writing process. Written assignments and oral practice help students communicate their ideas more accurately and confidently.

ESL 3102 English Grammar for Academic Purposes
4 credit(s), max credits 8; prereq 3101, [Non-native speaker of English, [C-TOEFL score of at least 190 or equiv], dept consent; 
Instructor: STAFF
Description: This course for academic credit is designed for students already enrolled in degree programs at the University of Minnesota to work on polishing their English skills and builds on the concepts covered in ESL 3101. This course focuses on increasing students' accuracy and range in English grammar. Topics that are especially relevant to academic writing, such as conciseness and smooth connections between sentences, are emphasized. Among the traditional topics of grammar, these are likely to be included: subordination, coordination, and transition expressions; tense, aspect, and associated adverbials; gerunds, infinitives, and other types of complementation; and lexical grammar—the grammar associated with individual words. Activities and regular assignments improve students' ability to analyze grammar, including their own mistakes, and to use grammar more effectively.

ESL 3201 Advanced English Reading and Composition
5 credit(s), max credits 10; prereq Non-native speaker of English, [IBT score of 53-67 or equiv], dept consent;
Instructor: STAFF
Description: This is an intensive reading and writing course for non-native speakers of English who are studying in degree programs at the University of Minnesota. Students will practice reading skills including skimming, scanning, previewing, predicting content, making inferences, and distinguishing fact from opinion. Students will practice writing skills including paraphrasing and summarizing, editing and proofreading their own and others' work, and selecting and incorporating sources. Students will learn to employ a process approach to writing, and will progress from developing paragraphs to developing academic essays employing appropriate rhetorical modes.

ESL 3202 Academic Reading and Composition
5 credit(s), max credits 10; prereq 3201, Non-native speaker of English, [IBT score of at least 68 or equiv], dept consent;
Instructor: STAFF
Description: This is a course for advanced non-native speakers of English who are enrolled in university degree programs that builds and refines advanced-level reading, writing, and critical thinking skills including audience awareness and incorporating sources. In this course students will read essays and articles on a variety of topics from multiple sources. Students will improve their ability to identify main ideas and details, analyze and critique support, and respond with their own ideas in writing and discussion. Students will write three multi-draft papers: a personal experience essay, an argumentative essay, and a
ESL 3302 Writing for Academic Purposes
4 credit(s), max credits 8; prereq 3202, non-native speaker of English, [C-TOEFL score of at least 190 or equiv], dept consent;  
Instructor: STAFF  
Description: This is a course for non-native speakers of English who are in university degree programs that builds and refines advanced-level reading, writing, and critical thinking skills including audience awareness and incorporating sources. In this course students will read essays and articles on a variety of topics from multiple sources. Students will improve their ability to identify main ideas and details, analyze and critique support, and respond with their own ideas in writing and discussion. Students will write three multi-draft papers: a personal experience essay, an argumentative essay, and a research report. Students will also develop informal writing skills.

ESL 3402 Research Writing for the American University
4 credit(s), max credits 8; prereq [Non-native speaker of English, [TOEFL IBT 79 or IELTS 6.5 or MNBatt 80 or equiv]] or dept consent;  
Instructor: STAFF  
Description: This course enables students to develop the methods of citation, conventions of style and organization, and critical thinking skills necessary for writing college-level research papers. Students select topics derived from a contemporary academic theme provided by the instructor and, applying a process approach, produce a research paper. Students will learn to use the library effectively. Problems with structure and vocabulary usage are addressed individually.

ESL 3501 Advanced English Listening and Speaking
5 credit(s), max credits 10; prereq Non-native speaker of English, [IBT score 53-67 or equiv], dept consent;  
Instructor: STAFF  
Description: This course for academic credit is designed for students already enrolled in degree programs at the University of Minnesota to work on improving their English listening and speaking skills in order to be more successful in their coursework. The course focuses on understanding academic lectures and discussions as well as participating in classroom discussions, asking questions of instructors and peers, and giving academic presentations.

ESL 3502 Academic Listening and Speaking
5 credit(s), max credits 10; prereq 3501, non-native speaker of English, [IBT score of at least 68 or equiv], dept consent;  
Instructor: STAFF  
Description: This course for academic credit is designed for students already enrolled in degree programs at the University of Minnesota to work on polishing their English listening and speaking skills. The course focuses on understanding academic lectures and discussions and as well as participating in classroom discussions, asking questions of instructors and peers, and giving academic presentations.

ESL 3551 English Pronunciation
4 credit(s), max credits 8; prereq Non-native speaker of English, dept consent;  
Instructor: STAFF  
Description: This 4 credit course is designed for advanced non-native English speaking students who want to polish their pronunciation skills in English. In order to improve your ability to understand and pronounce English, a variety of areas of pronunciation will be covered while paying special attention to whatever is most difficult for you. Students will also be equipped with techniques to practice pronunciation improvement on their own. Topics covered include English sounds (individually and in combination with other sounds), word stress, sentence stress, rhythm, intonation, linking, understanding fast speech, pronunciation and spelling connections. Open to graduate and undergraduate students, visiting scholars, and members of the community with advanced English skills or above. Check with the Minnesota English Language Program for more information 612-624-1503.

ESL 3602 Speaking for Academic Purposes
4 credit(s), max credits 8; prereq 3502, non-native speaker of English, [C-TOEFL score of at least 190 or equiv], dept consent;  
Instructor: STAFF  
Description: The goal of this course is to help non-native speakers of English who are already at the advanced level develop the skills needed to participate in American academic interactions at the university level of various types: presentations, group presentations, seminar-style discussions, and informal exchanges. In this class, you will participate in activities to help you present yourself professionally and socially in collegial settings with accuracy, variety, and flexibility. You will learn to organize and outline academic presentations, present information clearly and effectively, explain concepts and processes from your academic field to outsiders, involve audience members and respond to questions, and monitor and improve your spoken fluency, grammar and pronunciation.

ESL 3900 Special Topics in ESL
1-5 credit(s), max credits 10; prereq Non-native speaker of English, program consent;  
Instructor: STAFF  
Description: Special topics course open to students enrolled in special programs at the Minnesota English Language Program (MELP).

ENGL 1001V Introduction to Literature: Poetry, Drama, Narrative  
A-F only, 4 credit(s); prereq Honors or instr consent credit will not be granted if credit already received for: ENGL 1001,1002; Credit will not be granted if credit has been received for: ENGL 1001W; Meets CLE req of Literature; meets CLE req of Writing Intensive;  
Instructor: Scheil, Andrew  
Description: Student may contact the instructor or department for information.

ENGL 1181V Introduction to Shakespeare  
4 credit(s); prereq credit will not be granted if credit already received for: ENGL 1181, 1182; Credit will not be granted if credit has been received for: ENGL 1181V; Meets CLE req of Literature; meets CLE req of Writing Intensive;  
Instructor: Clayton, Tom  
Description: Unlike you, Shakespeare hadn't the benefit of "writing-enriched" courses, but he did all right and better, as you will read for yourself. Reading and understanding his plays is indispensable for any real experience of them, and is the gateway also to a complex world of action very like our own and a vast range of cultural expression that began with him. Without Shakespeare there would have been no Hamlet to wonder forever whether "To be or not to be . . . ." Shakespeare was born an imaginative genius in an age when a multicultural and hugely expressive Early Modern English was aborning, partly with his help. This enabled the making of a literature and drama of extraordinary richness, social complexity, depth of perception, and even global vision. Shakespeare plays everywhere--and has been especially powerful in Japanese, for example, both in film and on stage. His gift for creating dramatic actions extravagant, disturbing, funny, profound, and searching by turns was complemented by a verbal gift of astonishing scope and wit, whether Hamlet, Ophelia, or a gravedigger speaks. The language may seem remote on first acquaintance, but it comes readily into focus and color for most who are willing to make the effort--and be rewarded forevermore. Seven or eight representative plays, with attention to contemporary contexts and antecedents, continuing social relevance, and some recent
productions, with primary emphasis on understanding Shakespeare's text.

**Style:** 75% Lecture, 20% Discussion, 5% Small Group Activities. 

**Grading:** 15% mid exam, 35% final exam, 35% reports/papers, 15% quizzes.

**Exam Format:** Some objective questions but substantially essay, typically including analysis of passages, comparison and contrast, and synthesis.

**ENGL 1301W Introduction to Multicultural Literatures of the United States**

4 credit(s); prereq credit will not be granted if credit already received for: ENGL 1301, 1302; Credit will not be granted if credit has been received for: ENGL 1301V; Meets CLE req of Diversity and Soc Justice US; meets CLE req of Literature; meets CLE req of Writing Intensive; 

**Instructor:** STAFF

**Description:** There can never been one single voice for the American experience, an idea that is illuminated through a study of American multicultural literature. How have African Americans, Latinos/as, Native Americans, and immigrants told of their experiences? How has the struggle for equality found its voice in novels, plays, and testimonies? How does literature both embrace and resist the dominant culture? These questions are answered in diverse ways by such authors as W.E.B. DuBois, Frederick Douglass, Joy Kogawa, Leslie Marmon Silko, and many others.

**ENGL 1501W Literature of Public Life**

A-F only, 4 credit(s); prereq credit will not be granted if credit already received for: ENGL 1501; Meets CLE req of Civic Life and Ethics; meets CLE req of Literature; meets CLE req of Writing Intensive; 

**Instructor:** STAFF

**Description:** How has American literature addressed what it means to be a citizen? English 1501 examines literature written with the intent to leave an impression: works that have stunned, mobilized, stimulated, and galvanized the American public. The course is dialectical, setting diverse works against one another to form a dialogue that extends across chronological, geographic, and racial boundaries. "Literature" is defined broadly to include novels, speeches, essays, testimonies, sermons, plays, music, photography, and film. Recent readings have included Uncle Tom's Cabin, Maggie: A Girl of the Streets, The Souls of Black Folk, Twilight: Los Angeles, 1992, and Nickel and Dimed: On (Not) Getting By in America. This course doesn't sit on the shelf: it will ask students to examine and engage with the world around them.

**ENGL 1701 Modern Fiction**

3 credit(s); Credit will not be granted if credit has been received for: ENGL 1701H; Meets CLE req of Literature; 

**Instructor:** STAFF

**Description:** English 1701 provides an introduction to short stories and novels written after 1900, both in English originally, and in translation. During this time period, fascinating writers have graced the literary scene, including John Cheever, Ernest Hemingway, Franz Kafka, William Faulkner, Zora Neale Hurston, and James Baldwin. These are among the authors students are likely to study in Modern Fiction. Generally, the course is based around four to five novels and several short stories. This allows for slightly more time to be spent within each work than is often granted in broad survey courses. Because of the in-depth nature of this study, students learn to identify and analyze such elements of fiction as theme, genre, structure, form, language, and context.

**ENGL 1910W Topics: Freshman Seminar**

A-F only, 3 credit(s); prereq freshman; Meets CLE req of Writing Intensive; 

**Instructor:** Craig, Siobhan S

**Description:** Student may contact the instructor or department for information.

**ENGL 3001V Honors: Textual Analysis, Methods**

A-F only, 4 credit(s); prereq Honors, [English major or minor or approved BIS or IDIM program with English area] credit will not be granted if credit already received for: EngL 3001, 3801; Credit will not be granted if credit has been received for: ENGL 3001W; Meets CLE req of Writing Intensive; 

**Instructor:** Ismail, Qadri M

**Description:** Student may contact the instructor or department for information.

**ENGL 3001W Textual Analysis: Methods**

A-F only, 4 credit(s); prereq English major or minor or premajor or BIS/IDIM-English credit will not be granted if credit already received for: ENGL 3001, 3801; Credit will not be granted if credit has been received for: ENGL 3001V; Meets CLE req of Writing Intensive; 

**Instructor:** Sirç, Geoffrey Michael

**Description:** Student may contact the instructor or department for information.

**ENGL 3001W Textual Analysis: Methods**

A-F only, 4 credit(s); prereq English major or minor or premajor or BIS/IDIM-English credit will not be granted if credit already received for: ENGL 3001, 3801; Credit will not be granted if credit has been received for: ENGL 3001V; Meets CLE req of Writing Intensive; 

**Instructor:** Cuccullu, Lois B

**Description:** Student may contact the instructor or department for information.

**ENGL 3001W Textual Analysis: Methods**

A-F only, 4 credit(s); prereq English major or minor or premajor or BIS/IDIM-English credit will not be granted if credit already received for: ENGL 3001, 3801; Credit will not be granted if credit has been received for: ENGL 3001V; Meets CLE req of Writing Intensive; 

**Instructor:** Craig, Siobhan S

**Description:** Student may contact the instructor or department for information.

**ENGL 3002 Modern Literary Criticism and Theory**

3 credit(s); prereq credit will not be granted if credit already received for: EngL 3802: Credit will not be granted if credit has been received for: ENGL 3002H; 

**Instructor:** Ismail, Qadri M

**Description:** Theory is about thinking in the abstract. Or, in other words, about the usefulness of concepts. This class will focus on understanding some concepts critical to the study of literature. Some - like plot, character, narrative - are very old. Others - like the subject, agency, class, history, culture, literature itself - emerged with the enlightenment. Still others - like the unconscious, text, discourse, interpellation, difference - emerged in opposition to the concepts of the enlightenment. We will examine as many as possible, but the focus of the class will be on the cardinal categories of what has become known as post-structuralism. We will read Althusser, Aristotle, Barthes, Chatterjee, Derrida, Foucault, Freud, Hegel, Nietzsche, Spivak, and others.

**ENGL 3002 Modern Literary Criticism and Theory**

3 credit(s); prereq credit will not be granted if credit already received for: EngL 3802: Credit will not be granted if credit has been received for: ENGL 3002H; 

**Instructor:** Brown, Tony C

**Description:** Within the last thirty years Literary Theory has become one of the most important, energetic, and controversial areas of literary studies. It is now widely recognized as central to the disciplines of English and Comparative Literature. This course will introduce you to Literary Theory through the writings of major theorists (including Paul de Man and Jacques Derrida) as well as seminal works in the history of literary criticism (by Plato, Aristotle, and Pope among others). The latter provides the background necessary to take the full measure of the former's impact. In addition, due to the complex nature of what is now called Literary Theory, we will focus our reading and thereby lend coherence to the course by attending primarily to the question, "What is literature?" 

**Style:** 100% Discussion. The course is entirely discussion
ENGL 3003W Historical Survey of British Literatures I
4 credit(s); prerequisite credit will not be granted if credit already received for: EngL 3003; Meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;
Instructor: STAFF
Description: This course, the first in the Survey of British Literature series, introduces students to the literature of the British Isles from the Anglo-Saxon period to the eighteenth century. This broad sweep through time covers the Medieval period, the Renaissance (or, Early Modern Age), Civil Wars, Restoration, and the Enlightenment and provides a fascinating variety of works in a multitude of genres including poetry, drama, plays, novels, essays, autobiography, and speeches. Students will read authors such as Milton, Chaucer, Spenser, Marlowe, and Defoe, as well as lesser-known writers, thus gaining a more complete understanding of the literature of these periods. Because artistic expression is affected and informed by historical circumstances, texts are placed within their historical moments and considered in terms of their social, political, biographical, and economical contexts and close reading is used to connect features of the texts to their culture in order to gain a greater understanding of both. This course is demanding in its reading and writing requirements, but the variety and complexity of human experiences presented here affords great opportunity for stimulating discussion and thoughtful writing.

ENGL 3004W Historical Survey of British Literatures II
4 credit(s); prerequisite credit will not be granted if credit already received for: EngL 3003; Meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;
Instructor: McNaron, Toni A
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You will work independently, not as part of a student group. Visit “Class URL” for ODL policies, including fee and financial aid restrictions. EngL 3004W is the first course in a two-semester look at English literature from the Stuart period to the eighteenth century. This second course will consider the period from the eighteenth century to the present. The eighteenth century is considered to be the period when English literature, still relevant to us in the present. Because artistic expression is affected and informed by historical circumstances, texts are placed within their historical moments and considered in terms of their social, political, biographical, and economical contexts and close reading is used to connect features of the texts to their culture in order to gain a greater understanding of both. This course is demanding in its reading and writing requirements, but the variety and complexity of human experiences presented here affords great opportunity for stimulating discussion and thoughtful writing.

ENGL 3007 Shakespeare
A-F only, 3 credit(s); prerequisite credit will not be granted if credit already received for: EngL 3807; Credit will not be granted if credit has been received for: ENGL 3007H; Meets CLE req of Literature;
Instructor: Hirsch, Gordon D
Description: What makes the plays of William Shakespeare popular and interesting nearly 400 year after his death? We will read and discuss approximately ten Shakespeare plays in an effort to answer this question. The readings will represent a variety of genres and the chronological range of Shakespeare’s career as a playwright. Likely readings “Romeo and Juliet,” “A Midsummer Night’s Dream,” “Richard II,” “As You Like It,” “Hamlet,” “Twelfth Night,” “Macbeth,” “The Merchant of Venice,” “King Lear,” “The Winter’s Tale,” and “Antony and Cleopatra.” This course is a requirement for English majors, but non-majors are welcome too.
Style: 25% Lecture, 75% Discussion.
Grading: 20% final exam, 60% reports/papers, 20% class participation.
Exam Format: Multiple choice and essay on final exam.

ENGL 3007 Shakespeare
A-F only, 3 credit(s); prerequisite credit will not be granted if credit already received for: EngL 3807; Credit will not be granted if credit has been received for: ENGL 3007H; Meets CLE req of Literature;
Instructor: Watkins, John
Description: This class will examine Shakespeare’s major plays as expressions of England’s emergence as a major commercial and military power in the late sixteenth and early seventeenth centuries. Special attention will be paid to questions of national sovereignty, England’s place in wider European community, religious conflict, and Atlantic expansionism. The first section of the course focuses on three plays that raise questions about England’s relationship to the other countries within the British archipelago, especially Scotland: Macbeth, 1 Henry IV, and King Lear. We’ll then take up the larger question of England’s place in a evolving European intellectual and political culture with attention to three Italian plays, The Taming of the Shrew, The Merchant of Venice, and Othello. After Othello takes us to the Ottoman lands of the eastern Mediterranean, we will conclude with The Tempest and its vision of the old Mediterranean order yielded to the new economies of the Atlantic. Supplementary readings will be available both in Italian and in English translation. Students may either write three short papers or one extended research paper examining a play and its literary and historical sources.
Style: 40% Lecture, 60% Discussion.
Grading: 90% reports/papers, 10% class participation.

ENGL 3007 Shakespeare
A-F only, 3 credit(s); prerequisite credit will not be granted if credit already received for: EngL 3807; Credit will not be granted if credit has been received for: ENGL 3007H; Meets CLE req of Literature;
Instructor: Scheil, Katherine West
Description: This course is an in-depth examination of representative works by William Shakespeare. We will read Shakespeare’s plays in connection with the course of the
ENGL 3007H Honors: Shakespeare
A-F only, 3 credit(s); prereq Honors or instr consent credit will not be granted if credit already received for: ENGL 3007, 3807; Credit will not be granted if credit has been received for: ENGL 3077; Meets CLE req of Literature;
Instructor: Hancher, Michael
Description: Close study of six major plays from all phases of Shakespeare's career (Romeo and Juliet; A Midsummer Night's Dream; As You Like It; Henry IV, Part One; Hamlet; and The Tempest); as well as some of his sonnets. Special attention will be paid to Shakespeare's double craft as both a poet and playwright.
Style: 30% Lecture, 5% Film/Video, 60% Discussion, 5% Small Group Activities.
Grading: 60% reports/papers, 20% quizzes, 10% reflection paper, 10% class participation. The "basic course requirements" (mentioned in the University definitions of course grades) include regular attendance.

ENGL 3008 Research in English: In and Out of the Archives
A-F only, 3 credit(s); prereq English major or minor or BIS/IDIM English or instr consent or dept consent;
Instructor: Scandura, Jani
Description: Student may contact the instructor or department for information.

ENGL 3027W The Essay
4 credit(s); Meets CLE req of Writing Intensive;
Instructor: STAFF
Description: This is a course for students ready to face more challenging assignments and deepen their comfort and skill with writing. The instructor helps the student develop more sophisticated writing strategies and experiment with more creative stylistic choices. Assignments might include autobiographies, critical comparisons, reviews of articles or books, cultural analyses, persuasive essays, and annotated bibliographies. Students in this course learn to: Generate topics and develop essays with greater independence than they exercised in freshman composition. Write for multiple audiences - academic and non-academic - making appropriate decisions about content, rhetoric, structure, vocabulary, style, and format. Write creative non-fiction and other genres incorporating complex description and analysis. Analyze the conventions and styles of writing in their major field. Experiment with new and more sophisticated writing strategies and styles.

ENGL 3070 Studies in Literary and Cultural Modes
3 credit(s), max credits 9, 3 completions allowed;
Instructor: Clayton, Tom
Description: This course aims to cultivate critical thinking in general and, in particular, a clear sense of the principles, criteria, and practices involved in the criticism of literary works (and of much else); with attention to such central terms and concepts as "literature" and to the curious contention that there is no such thing except by arbitrary privileging, which is refuted daily both on reflection and in practical experience. The work is critical reading and discussion of selected works and writers from classical antiquity to the twentieth century, including Plato, Aristotle, Horace, and Longinus; and English critics from Sir Philip Sidney to T. S. Eliot, including Alexander Pope, Samuel Johnson, William Wordsworth, S. T. Coleridge, Oscar Wilde, and others. Some of the works are themselves in recognized literary forms, as in dialogues (Plato, Wilde), or in verse (Horace, Pope). Some writers are more theoretical (Plato, Aristotle, Sidney, others), and Aristotle laid the foundation for or anticipated much that has been written since, asking of any work, in effect, "What is it(s) for(m)?" Others address not only critical issues but literary works themselves (Aristotle, Horace, Longinus, Dryden, Johnson, Coleridge, Eliot). Recommended preparatory reading: Harry G. Frankfurt, On Bullshit (Princeton UP. 2005). Frankfurt deplores this kind of discourse?which is rampant?and the instructor tries to avoid it.
Style: 40% Lecture, 45% Discussion. Quizzes and presentations
Grading: 20% mid exam, 40% final exam, 15% reports/papers, 15% quizzes, 10% other evaluation. Overall performance including attendance.
Exam Format: Mostly essay, some objective questions

ENGL 3090 General Topics
1-4 credit(s), max credits 12, 3 completions allowed;
Instructor: Liberman, Anatoly
Description: This is a course for students ready to face more challenging assignments and deepen their comfort and skill with writing. The instructor helps the student develop more sophisticated writing strategies and experiment with more creative stylistic choices. Assignments might include autobiographies, critical comparisons, reviews of articles or books, cultural analyses, persuasive essays, and annotated bibliographies. Students in this course learn to: Generate topics and develop essays with greater independence than they exercised in freshman composition. Write for multiple audiences - academic and non-academic - making appropriate decisions about content, rhetoric, structure, vocabulary, style, and format. Write creative non-fiction and other genres incorporating complex description and analysis. Analyze the conventions and styles of writing in their major field. Experiment with new and more sophisticated writing strategies and styles.

ENGL 3090 General Topics
1-4 credit(s), max credits 12, 3 completions allowed;
Instructor: Liberman, Anatoly
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You will work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. At present those interested in English etymology study the history of English, methods of linguistic reconstruction, Sanskrit, Greek, Latin, French and so forth. Every subject can be studied in depth, and this is what specialists do. But it is also possible to be introduced to a scholarly discipline and learn enough to have an informed opinion about it. This course is exactly such an introduction. Its user can be anyone who wants to know how the words of English emerged, clashed, combined, lost their initial freshness, and died, to give way to upstarts whose day will also come. We will travel from the misty home of the Indo-Europeans to the North Sea and Great Britain. We will follow the Vikings and the Normans. The books and audio recordings will be your guides in these peregrinations.
Style: This is a printed correspondence section.
Grading: 35% reports/papers, 65% written homework.
Exam Format: No exams

ENGL 3090 General Topics
1-4 credit(s), max credits 12, 3 completions allowed;
Instructor: Liberman, Anatoly
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You will work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. At present those interested in English etymology study the history of English, methods of linguistic reconstruction, Sanskrit, Greek, Latin, French and so forth. Every subject can be studied in depth, and this is what specialists do. But it is also possible to be introduced to a scholarly discipline and learn enough to have an informed opinion about it. This course is exactly such an introduction. Its user can be anyone who wants to know how the words of English emerged, clashed, combined, lost their initial freshness, and died, to give way to upstarts whose day will also come. We will travel from the misty home of the Indo-Europeans to the North Sea and Great Britain. We will follow the Vikings and the Normans. The books and audio recordings will be your guides in these peregrinations.
Style: This is a printed correspondence section.
Grading: 35% reports/papers, 65% written homework.
Exam Format: No exams

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
ENGL 3090 General Topics
1-4 credit(s), max credits 12, 3 completions allowed;
Instructor: Liberman, Anatoly
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You will work independently not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. At present those interested in English etymology study the history of English, methods of linguistic reconstruction, Sanskrit, Greek, Latin, French and so forth. Every subject can be studied in depth, and this is what specialists do. But it is also possible to be introduced to a scholarly discipline and learn enough to have an informed opinion about it. This course is exactly such an introduction. Its user can be anyone who wants to know how the words of English emerged, clashed, combined, lost their initial freshness, and died, to give way to upstarts whose day will also come. We will travel from the misty home of the Indo-Europeans to the North Sea and Great Britain. We will follow the Vikings and the Normans. The books and audio recordings will be your guides in these peregrinations.
Style: This is a printed correspondence section.
Grading: 35% reports/papers, 65% written homework.
Exam Format: No exams

ENGL 3122 Shakespeare II: The Major Themes
3 credit(s); prereq 3007 or instr consent credit will not be granted if credit received for: EngL 3131;
Instructor: Haley, David B
Description: Shakespeare II: The Major Themes is for students who have taken one of the introductory courses (EngL 1181 or EngL 3007) and want to have another look at the way Shakespeare handles his favorite topics. Those include themes familiar to his Elizabethan audience, such as how the community treats outsiders, what the public role of women should be, how a traditional institution like monarchy survives rebellion and change. Because the society Shakespeare portrays in his drama places a higher value on loyal service than it does on equality, the quest for a just social hierarchy permeates his comedies (e.g. A Midsummer Night's Dream) and romances (e.g. The Tempest) as well as tragedies like King Lear. The content of 3122 varies each time it is offered, but students will read at least eight plays and interpret them in class. In place of midterm exams, you'll take short (thirty-minute) tests requiring brief essays, and a term paper (2000 words) will replace the final. Class discussion will focus on Shakespeare's text, with the instructor providing any historical and theatrical background necessary for understanding what we read. Students are encouraged to try different approaches to Shakespeare. These can range from examining his sources to contrasting different performances, but every approach must be grounded in Shakespeare's text, which you'll be expected to quote and partly memorize. Shakespeare II: The Major Themes is designed to help you find your own preferred style of talking about Shakespeare.
Style: 33% Lecture, 67% Discussion.
Grading: 40% reports/papers, 30% quizzes, 30% class participation.

ENGL 3132 The King James Bible as Literature
3 credit(s); prereq credit will not be granted if credit received for: 3122;
Instructor: Haley, David B
Description: Literature of the New Testament (Gospels, Acts, Pauline Epistles, Revelation). We'll spend a couple of weeks reviewing books from the Jewish Bible (the "Old Testament") such as Exodus, Deuteronomy, Isaiah, and Ecclesiastes. Then we'll focus on two big topics of continuing interest: (1) the Kingdom of Heaven that Jesus promised to his followers, and (2) the more practical, but still idealized community envisioned by Paul. By approaching these works as literature, we may hope to account in some measure for their extraordinary success. All biblical readings will be in the King James version (published by Zondervan). Instead of exams, there will be three or four tests based on study questions, several short essays, and a 2000-word term paper.
Style: 80% Lecture, 20% Discussion.
Grading: 60% reports/papers, 40% quizzes.
Exam Format: The tests are based mainly on study-questions in depth, and this is what specialists do. But it is also possible to be introduced to a scholarly discipline and learn enough to have an informed opinion about it. This course is exactly such an introduction. Its user can be anyone who wants to know how the words of English emerged, clashed, combined, lost their initial freshness, and died, to give way to upstarts whose day will also come. We will travel from the misty home of the Indo-Europeans to the North Sea and Great Britain. We will follow the Vikings and the Normans. The books and audio recordings will be your guides in these peregrinations.
Style: This is a printed correspondence section.
Grading: 35% reports/papers, 65% written homework.
Exam Format: No exams

ENGL 3141 The Restoration and the Eighteenth Century
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: ENGL 5140;
Instructor: Brown, Tony C.
Description: Student may contact the instructor or department for information.

ENGL 3222 American Novel From 1900
3 credit(s); Credit will not be granted if credit has been received for: ENGL 3222H;
Instructor: Rabinowitz, Paula
Description: America is a novel--it's new, it's complex, it contains a multiplicity of characters, voices, stories, regions and points of view. This course reads some of the BIG AMERICAN BOOKS of the 20th century to try to figure out what this nation and its narration is all about. Hint: MONEY, SEX, RACE, BOOZE and so forth. Readings include: THE GOLDEN BOWL, THE HOUSE OF MIRTH, U.S.A., THE GIRL, MISS LONELLYHEARTS, INVISIBLE MAN, TRIPMASTER MONKEY: HIS FAKE BOOK, OBASAN, ABSALOM, ABSALOM, MAUD MARTHA, and some selected pulp fiction.
Style: 50% Lecture, 50% Discussion. Occasional film viewings
Grading: 15% mid exam, 75% reports/papers, 10% in-class presentation.
Exam Format: essay

ENGL 3300 Multicultural American Literatures and Cultures
3 credit(s); Credit will not be granted if credit has been received for: ENGL 5300;
Instructor: Scandura, Jani
Description: Student may contact the instructor or department for information.

ENGL 3301H Honors: American Drama
3 credit(s); prereq honors student; Credit will not be granted if credit has been received for: ENGL 3231;
Instructor: Lee, Josephine D
Description: Student may contact the instructor or department for information.

ENGL 3302 Multicultural American Literatures and Cultures
3 credit(s); Credit will not be granted if credit has been received for: ENGL 3506;
Instructor: Gonzalez, Ramon
Description: Student may contact the instructor or department for information.

ENGL 3505 Community Learning Internships I
A-F only, 3 credit(s);
Instructor: Daigre, Eric Stephen
Description: Since this is the first of a two-semester course, students registering for EngL 3505 will continue on to EngL 3506 (Community Learning Internships II). In class, students will explore literacy, educational theory, concepts of civic engagement, as well as the connections between literature and
literacy, theory and practice, community work and academic study. Outside of class, students work 3-4 hours per week at participating nonprofit and educational organizations ranging from K-12 schools to adult education centers. Class presentations. Readings. Weekly reflective and analytical writing assignments will add up to a substantial portfolio. Students receive initial training from Career and Community Learning Center and Minnesota Literacy Council, and orientations at community sites.

ENGL 3601 Analysis of the English Language 4 credit(s); prereq credit will not be granted if credit already received for: EngL 3601W; Instructor: Elfenbein, Andrew Description: This course will introduce you to the analysis of the English language, currently the language with the best claim to being a global language. Since many of you are native speakers of English and all of you have considerable familiarity with the language, this course is an opportunity to get to know much more about something that you may consider a key aspect of your life. Indeed, for many, it may be so ordinary that it is easy to take for granted what it means to be an speaker of English. But language has come to play a major role in modernity and in globalization, and this course will give you a chance to think about what is going to become a major issue in the twenty-first century: the status of English. The class will cover basics of formal linguistics (phonology, morphology, syntax, and semantics); the history of English; sociolinguistics; and literary linguistics. Style: 80% Lecture, 20% Discussion. Grading: 30% written homework. Tests: 60% Exam Format: multiple choice and short answer

ENGL 3711 Literary Magazine Production Lab I A-F only, 4 credit(s); Instructor: STAFF Description: In the first of two sequential courses (ENGL 3712 registration required), students produce the undergraduate art and literary magazine Ivory Tower. Students decide upon the desired identity, tone, and direction of the issue. They explore and take on magazine staff responsibilities. They call for submissions, make selections, investigate the edlt and design processes, set a budget and begin fund-raising.

ENGL 3741 Literacy and American Cultural Diversity 4 credit(s); prereq credit will not be granted if credit already received for: EngL 3607; Meets CLE req of Civic Life and Ethics; meets CLE req of Literature; Instructor: Daigre, Eric Stephen Description: Students will serve as literacy workers for 2 hours a week outside of class at participating organizations in the nonprofit and educational sectors. This class combines academic study with experiential learning in order to collectively build a more engaged, complex understanding of the functions of literacy, literacy, educational institutions, counter-institutional literacy programs, and the different cultures and communities in Minnesota and the Americas in general. We'll explore questions of "praxis," considering and applying our readings to the concrete circumstances of our community work, at all points trying to "make the connection" between our classroom and community work. In asking what literacy really means and what it means to be "democratic educators" in both spheres, we will challenge the distinction between classroom and community as an artifact of the modern research university. Reading: literary texts, sociological and educational theory, literacy studies. 2 papers, 2 presentations.

ENGL 3960W Senior Seminar A-F only, 4 credit(s); prereq English major, [jr or sr], major adviser approval, dept consent credit will not be granted if credit already received for: EngL 3960; Meets CLE req of Writing Intensive; Instructor: Fitzgerald, M. J Description: In this class we will be reading Northanger Abbey, Persuasion and Pride and Prejudice by Jane Austen and Night and Day, Mrs Dalloway and To The Lighthouse by Virginia Woolf. We will discuss the differences and similarity between these two major novelists with particular emphasis on the stylistic and the thematic. Students will be expected to submit their senior paper, and accommodation will be made for two individual meetings with students to discuss their project.

ENGL 3960W Senior Seminar A-F only, 4 credit(s); prereq English major, [jr or sr], major adviser approval, dept consent credit will not be granted if credit already received for: EngL 3960; Meets CLE req of Writing Intensive; Instructor: Krug, Rebecca L Description: Student may contact the instructor or department for information.

ENGL 3993 Directed Study OPT No Aud, 1-4 credit(s), max credits 8; prereq One 3xxx, [English major or minor or [BIS or IDIM or ICP]] with English concentration], [jr or sr], instr consent , dept consent , college consent ; Instructor: STAFF Description: Guided individual study. Open to qualified students for one or more semesters. Before receiving permission to register, students submit to the English Undergraduate Studies office a signed contract using the CLA "Student/Faculty Learning Contract" available in all CLA offices.

ENGL 4003 History of Literary Theory A-F only, 3 credit(s); Instructor: Farber, Lianna Description: This course explores some of the major questions about literary theory that preoccupied important thinkers from antiquity through modernism by looking at how they posed and answered questions about language (how words mean), audience (to whom they mean) and the literary (how literary writing differs from other forms of writing). We will begin by examining how theorists thought that words bear meaning: when, for example, can words carry more than their literal meaning? Must they always carry more than their literal meaning? If and when they do carry "extra" meaning, how do we know what to understand? Next, we will look to questions of audience: who is the implied audience for literature? Is the implied audience necessarily male? Is the audience's understanding of a work of literature the same as the author's? how can the author manipulate understanding? What is the relationship between literature and rhetoric? Finally, we will explore these theorists' understanding of what literature is and how it differs from other kinds of writing. Readings will include works by Plato, Aristotle, Augustine, Christine de Pizan, Dante, Sidney, Behn, Wordsworth, Coleridge, Shelley, and Woolf. Style: 25% Lecture, 75% Discussion.

ENGL 4152 Nineteenth Century British Novel A-F only, 3 credit(s); Instructor: Hirschl, Gordon D Description: This course is intended as a survey of the 19th-century British novel for advanced undergraduates and graduate students. We will likely read one novel each by the following novelists: Jane Austen, Charlotte Bronte, Charles Dickens, Elizabeth Gaskell, Wilkie Collins, George Eliot, Robert Louis Stevenson, and Thomas Hardy. Style: 35% Lecture, 50% Discussion, 15% Student Presentation. Grading: 60% reports/papers, 10% attendance, 10% in-class presentation, 20% class participation.

ENGL 4722 Alphabet to Internet: History of Writing Technologies

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
ENGL 5001 Ph.D. Colloquium: Introduction to Editing

4 credit(s); prerequisite credit will not be granted if credit received for: EngL 3633; Instructor: Hancher, Michael

Description: The technologies of writing -- the alphabet, handwriting, printing, and electronic text -- and their cognitive and social consequences. Topics include writing and memory; literacy, power, and control; printing, language, and national identity; alphabetization and other ways of ordering the world; secrecy, privacy, and publicity; typography, legibility, and design; theories of technological determinism; the future of reading after the internet. Readings will range from Homer and Plato to Wikipedia and Facebook.

Style: 40% Lecture, 60% Discussion.
Grading: 65% reports/papers, 10% in-class presentation, 15% class participation, 10% other evaluation. "Other Evaluation" is 10% for online quizzes on readings. The "basic course requirements" (mentioned in the University definitions of course grades) include regular attendance.

ENGL 5090 Readings in Special Subjects

3-4 credit(s), max credits 9, 3 completions allowed; prerequisite grad student or instr consent; Credit will not be granted if credit has been received for: ENGL 5100; Instructor: STAFF

Description: Student may contact the instructor or department for information.

ENGL 5150 Readings in 19th-Century Literature and Culture

3 credit(s), max credits 9, 3 completions allowed; prerequisite grad student or instr consent; credit will not be granted if credit received for: EngL 5250; Instructor: Elfenbein, Andrew

Description: Student may contact the instructor or department for information.

ENGL 5711 Introduction to Editing

4 credit(s); prerequisite credit will not be granted if credit received for: 5401; Instructor: STAFF

Description: If the media doomsayers are right, editing is a dying craft. Right now, polytechnic institutes are training the next generation of copyeditors in Bangalore. Newspapers are shedding weight like dangling celebrities in an US photospread. Bloggers are proving that no one need come between a rant and a reader. (Granted, they're doing it one typo at a time.) But someone, somewhere, has to create that alumni magazine, the St. Paul Saints season guide, and the co-op newsletter. In other words, a demand persists in the American marketplace for someone who knows how to turn slop into steak. In this class, we'll study editing as a process, a protocol, and a philosophy. To elaborate, we'll study the conventions of editing (grammar, story, and style) and we'll meet professionals who do it well. (Fall '08 guests included the editor in chief of the Minnesota Historical Society Press, the art director of City Pages, the media analyst at MinnPost, and an executive employment lawyer at U.S. Bancorp.) We'll analyze why creative collaboration can feel like a playground brawl. Mostly, using real, raw manuscripts from newspapers, magazines, and books, we'll practice how to screw up the written word--with the ultimate goal of screwing up a little less.

ENGL 5711 Introduction to Editing

4 credit(s); prerequisite credit will not be granted if credit received for: 5401; Instructor: Zuckerman, Jeffrey Jay

Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You will work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. You may be wondering whether this course can help you if you are interested in magazine and newspaper editing. Although you will be focusing on nonfiction texts, the skills you learn here will apply to other areas of editing. All editing requires that you exhibit creativity, clarity, and consistency. This course will also help you become a better editor of your own writing and a more perceptive and intelligent reader of other's writing. You will begin to note how authors put words together, use punctuation, and construct sentences and paragraphs. You will come to appreciate the well-chosen word, the well-turned phrase, the considered opinion, the persuasive argument.

Style: Printed correspondence section
Grading: 30% final exam, 70% written homework. Written assignment 1 (S/N), 5% Written assignments 2 through 5...15% each Written assignment online...5% See the downloadable syllabus for complete grading information.
Exam Format: Supervised, in-person exam
final book list is not settled, we are likely to read novels and stories taken from the following list: Honore de Balzac, Lost Illusions; Machado de Asis, The Posthumous Memoirs of Bras Cubas; Gustave Flaubert, Sentimental Education; Richard Wright, Native Son; Thomas Mann, Tonio Kroger; Theodor Dreiser, An American Tragedy; I. Gladkov, Cement; Christa Wolf, The Quest for Christa T.; Abdellah Munif, Cities of Salt; Roberto Bolaño, The Savage Detectives; and selected short stories by Jorge Luis Borges, Leo Tolstoy, or Anton Chekhov. We may look at “realism” in related genres as well: for example, the paintings of Gelli Korzhev. Some of the relevant theory and criticism includes essays by Brecht, Lukács, Bloch, Candido, Schwarz, Williams, Carpenter, Calvino, Chamoiseau, and Bourdieu. Requirements: One or two shorter essays (3-pages), and one final essay.

Style: 30% Lecture, 40% Discussion, 30% Student Presentation.

Grading: 50% reports/papers, 20% in-class presentation, 30% class participation.

ENGL 8090 Seminar in Special Subjects
3 credit(s), max credits 12, 4 completions allowed;
Instructor: Farber, Lianna
Description: Student may contact the instructor or department for information.

ENGL 8120 Seminar in Early Modern Literature and Culture
A-F only, 3 credit(s), max credits 12, 4 completions allowed;
Instructor: Watkins, John
Description: Team-taught by Ruth Mazo Karras and John Watkins, this course examines discourses and practices of gender and sexuality as they developed, competed, and evolved in Medieval and Early Modern Europe. After some introductory sessions focusing on ancient foundational texts and key contemporary theorists, we will explore the role of gender in several areas of premodern life: the body and sexuality, marriage and the family, work, material culture and everyday life, religion, and politics. Readings will include primary pre-modern texts and secondary articles and monographs; the precise mix will depend on individual interests and registration designators. Caroline Walker Bynum and other visiting scholars will join us for several discussions. We welcome both specialists in the premodern period as well as anyone else interested in gender and sexuality. ENGL and HIST 8xxx students will write a research paper of article scope and length. MEST, HIST 5900 and GWSS students will write shorter weekly responses and a mock grant application.

ENGL 8150 Seminar in Shakespeare
3 credit(s), max credits 9, 3 completions allowed;
Instructor: Schei, Katherine West
Description: From early modern London theatres to twenty-first century American prisons, from appropriations of Macbeth in Bollywood (Macboul) to an Aboriginal As You Like It, this course focuses on the performance history of Shakespeare, from the early modern period to the present. We will begin with the recent renewed interest in the material conditions of the early modern stage, and then move through select highlights of performance history of subsequent centuries, ending with contemporary performance of Shakespeare, particularly on the global stage. We will use five or six plays as examples for analyzing how the Shakespearean text is adapted and reshaped by subsequent generations of writers, playwrights, and audiences in different historical periods and geographical locales, and we will explore various reasons for those performances/adaptations according to historical, social, and cultural practices.

English: Creative Writing
222 Lind Hall

ENGW 1102 Introduction to Fiction Writing
3 credit(s);
Instructor: STAFF
Description: Introductory course in the art and craft of reading and writing fiction. Students will read a variety of classic and contemporary fiction. Students will be responsible for composing original stories; writing comments on student work; workshop participation; attendance at a literary reading; and a final portfolio of fiction.

Style: 25% Lecture, 50% Discussion.

Exam Format: Revised stories/Final Portfolio

ENGW 1103 Introduction to Poetry Writing
3 credit(s);
Instructor: STAFF
Description: Introductory course in the art and craft of reading and writing poetry. Students will read and analyze contemporary and classic works of poetry while also constructing and revising their own poetry. Students will be responsible for crafting original poetry; commenting on student work; workshop participation; attendance at a literary reading; short presentations and/or papers; a final portfolio of poetry.

Style: 25% Lecture, 50% Discussion. workshop

Exam Format: Revised poems/final portfolio

ENGW 1104 Introduction to Literary Nonfiction Writing
3 credit(s);
Instructor: STAFF
Description: Introductory course in the art and craft of reading and writing literary nonfiction. Students will read and analyze contemporary and classic nonfiction literary works (essays, memoir, biography, autobiography, short-shorts) and also construct and revise their own nonfiction pieces. Students will be responsible for crafting original works of nonfiction; commenting on student work; workshop participation; attendance at a literary reading; short papers and/or presentations; a final portfolio of nonfiction.

Style: 25% Lecture, 50% Discussion. workshop

Exam Format: Revised nonfiction/final portfolio of nonfiction

ENGW 3102 Intermediate Fiction Writing
3 credit(s); prereq 1101 or 1102 or dept consent;
Instructor: STAFF
Description: Intermediate course in the art and craft of reading/writing fiction for students with previous experience in fiction writing. Students will read and analyze contemporary and classic short fiction and also construct their own stories. Students will be responsible for written comments on student work; workshop participation; attendance at a literary reading; some short papers and presentations; and a final portfolio of short fiction.

Style: 25% Lecture, 50% Discussion. workshop

Grading: Revised fiction/final portfolio of fiction

ENGW 3102 Intermediate Fiction Writing
3 credit(s); prereq 1101 or 1102 or dept consent;
Instructor: Daniel, Judith A
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You will work independently, not as part of a student group. Visit “Class URL” for ODL policies, including fee and financial aid restrictions. The short story is a fascinating and very appealing form, particularly for American writers. Perhaps it is our history of discord, social upheaval, our restlessess and need for constant change that makes us so at home with a form that is short, intense, concentrated, and versatile. Whatever the reason, American writers of the past two hundred years have developed the short story form into a national treasure. From the wonderfully rambling descriptions of Washington Irving, whose dislocated citizen, Rip Van Winkle, slept through the Revolutionary War, to John Cheever’s dislocated Neddy Merrill, who fast forwards into his own future, the American short story bristles with life and energy as it charts, more accurately than our history books, our world view, our lives, and our sense of who we are and what we are becoming.

Style: This is a printed correspondence section.

Grading: Your course grade will be based on your written assignments. 1, 2, 3, and 5 = 40% and 4 and 6 (the first and final drafts of your short story) = 60%. If you elect S/N grading, you must average at least a C- to earn a grade of S.
ENGW 3104 Intermediate Poetry Writing
3 credit(s); prereq 1101 or 1103 or dept consent;
Instructor: STAFF
Description: This intermediate level course is for writers who have some previous experience in writing poetry. The course will focus on craft and stylistic techniques using writing exercises and readings with a range of poets writing in different forms. The workshop portion of the class will be devoted to developing individual student work; student critiques; some short papers and presentations; attendance at one literary reading; final portfolio of poetry.
Style: 25% Lecture, 50% Discussion. workshop
Exam Format: Final portfolio of poems

ENGW 3106 Intermediate Literary Nonfiction Writing
3 credit(s); prereq 1101 or 1104 or dept consent;
Instructor: STAFF
Description: This intermediate level course is for students who have some experience writing literary nonfiction: memoir, essay, biography, etc. Students will read and analyze contemporary and classic nonfiction works while also constructing and revising their own nonfiction writing. Written comments on student work, workshop participation, some short papers and presentations, attendance at a literary reading and a final portfolio of nonfiction writing.
Style: 25% Lecture, 50% Discussion.
Exam Format: revised nonfiction/final portfolio of nonfiction

ENGW 3110 Topics in Creative Writing
3 credit(s), max credits 9, 3 completions allowed; prereq 1101 or 1102 or 1103 or 1104 or dept consent;
Instructor: Daniel, Judith A
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You will work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Journaling into Fiction, like all creative writing courses, can't be taught. I can start you on the way toward developing the craft of writing for a public audience, but your own love of reading and writing will be the most important impetus for your success. The other important thing you'll need is a passionate belief that you have something so exciting, interesting, and valuable to tell the rest of us that you will forge a pattern of words to make us pay attention. If you're not keeping a journal at the moment, start one today. This course is designed to work from your journals so if you're not keeping one, many of the suggestions and exercises won't make as much sense to you.
Style: This is a printed correspondence section.
Grading: 100% written homework.
Exam Format: No exams

ENGW 3110 Topics in Creative Writing
3 credit(s), max credits 9, 3 completions allowed; prereq 1101 or 1102 or 1103 or 1104 or dept consent;
Instructor: Daniel, Judith A
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You will work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Journaling into Fiction, like all creative writing courses, can't be taught. I can start you on the way toward developing the craft of writing for a public audience, but your own love of reading and writing will be the most important impetus for your success. The other important thing you'll need is a passionate belief that you have something so exciting, interesting, and valuable to tell the rest of us that you will forge a pattern of words to make us pay attention. If you're not keeping a journal at the moment, start one today. This course is designed to work from your journals so if you're not keeping one, many of the suggestions and exercises won't make as much sense to you.
Style: This is a printed correspondence section.
Grading: 100% written homework.
Exam Format: No exams

ENGW 3110 Topics in Creative Writing
3 credit(s), max credits 9, 3 completions allowed; prereq 1101 or 1102 or 1103 or 1104 or dept consent;
Instructor: Daniel, Judith A
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You will work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Journaling into Fiction, like all creative writing courses, can't be taught. I can start you on the way toward developing the craft of writing for a public audience, but your own love of reading and writing will be the most important impetus for your success. The other important thing you'll need is a passionate belief that you have something so exciting, interesting, and valuable to tell the rest of us that you will forge a pattern of words to make us pay attention. If you're not keeping a journal at the moment, start one today. This course is designed to work from your journals so if you're not keeping one, many of the suggestions and exercises won't make as much sense to you.
Style: This is a printed correspondence section.
Grading: 100% written homework.
Exam Format: No exams

ENGW 3960W Writing Workshop for Majors
A-F only, 4 credit(s); prereq Engl major, 6 cr of ENGW including 3xxx appropriate for workshop genre, [jr or sr], major adviser approval, dept consent; Meets CLE req of Writing Intensive;
Instructor: Gonzalez, Ramon
Description: Student may contact the instructor or department for information.

ENGW 5102 Advanced Fiction Writing
4 credit(s), max credits 8; prereq dept consent;
Instructor: STAFF
Description: We will be reading and critiquing student fiction, including short stories and chapters from novels. I will be handing out guidelines for doing so at the first meeting. Members of the workshop should expect to have two, possibly three, manuscripts critiqued, each one approximately 15 to 20 pages in length, and we will also be reading and discussing short stories from an anthology, considering their formal properties. I will expect active participation from everyone, including written comments to be turned in to the week's contributors and to me.

ENGW 5104 Advanced Poetry Writing
4 credit(s), max credits 8; prereq dept consent;
Instructor: STAFF
Description: Students will write and workshop original poetry.
Readings from classic and contemporary poetry collections and anthologies. Students will be expected to write short critiques; short analytical reports on reading assignments; final portfolio of revised poetry.

ENGW 5060 Advanced Literary Nonfiction Writing
4 credit(s), max credits 8; prerequisite: dept consent
Instructor: STAFF
Description: Students will write and critique original works of creative nonfiction. Students will be expected to write short critiques; short reports on assigned reading material; final portfolio to revise creative nonfiction.

ENGW 5202 Journal and Memoir Writing
3 credit(s);
Instructor: Galt, Margot Kriel
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You will work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Remembering incidents and facts, nulling them over in the present, and extracting insights from them is one of a writer's most important activities. As a result of taking this course, you will be able to brainstorm material from your memory; use a journal to develop writing; draft memoir prose, employing principles of literary variety, appropriate diction, sensuous description, narrative momentum, poetic and thematic shaping, and suitable metaphor; employ principles of revision; use the response of readers or listeners to improve your work; identify and appreciate works of memoir by earlier and contemporary authors; and begin to understand how racial and ethnic differences affect the stories people tell about themselves.
Style: This is a printed correspondence section.
Grading: 100% written homework. The first submission is ungraded. The following three submissions are weighted equally. However, if there is a dramatic improvement during the course, later submissions will be given more weight than earlier ones.
Exam Format: No exams

ENGW 5310 Reading as Writers
4 credit(s), max credits 8; prerequisite: grad student, dept consent
Instructor: Farah, Nuruddin
Description: Student may contact the instructor or department for information.

ENGW 5993 Directed Study in Writing
1-4 credit(s), max credits 18, 18 completions allowed; prerequisite: instr consent, dept consent, college consent;
Instructor: STAFF
Description: By arrangement with individual faculty. For more information, contact the Creative Writing Program at (612) 625-6366.

ENGW 8101 Reading Across Genres
S-N only, 4 credit(s); prerequisite: Creative writing MFA student, dept consent
Instructor: Fitzgerald, M. J
Description: Student may contact the instructor or department for information.

Entomology
219 Hodson Hall

ENT 3281 Veterinary Entomology
A-F only, 3 credit(s);
Instructor: Moon, Roger Dean
Description: Flies in the barn? Fleas on Fido? What are they, from where do they come, and what can we do to keep them from bothering our animals and ourselves? A great variety of insects, ticks and mites occur around livestock and companion animals. Some of those insects are parasites that reduce animal health, comfort and productivity. Others cause no harm or are even beneficial. Students will learn how to identify the important species, learn about their biology and ecology, and learn about their effects on animals and people. Once understood, students will learn to develop sustainable pest management programs to reduce pest impacts. Emphasis is on problem identification and solution. Class meetings consist of instructor presentations, group activities, specimen identification, and demonstrations. Outside class, student teams identify and describe a real-world animal management facility, and then develop practical and economical pest management recommendations for their chosen facility. This course is designed for undergraduate biology, agriculture and prevet majors, and others who are interested in animal management and care.
Style: 60% Lecture, 20% Discussion, 20% Small Group Activities.
Grading: 30% final exam, 30% reports/papers, 30% quizzes, 10% attendance.
Exam Format: Two quizzes and final exam are by group testing, where students work out answers to take-home exam, and then work with semester group to compose group's answer. Grade is average of individual and group answers. Past students have liked group testing!

ENT 3925 Insects, Aquatic Habitats, and Pollution
A-F only, 3 credit(s); prerequisite [[3005 or Biol 3407 or FW 2001], [jr or sr]] or instr consent;
Instructor: Ferrington Jr., Leonard Charles
Description: This course will focus on the effects differing classes of pollutants have on the biology, ecology and community structure of insects that are aquatic. It is intended for (1) upper level undergraduates with interests in ecology, limnology, natural resources management or conservation, and (2) first-year graduate students involved in research projects in Entomology, Water Resources, Fisheries and Wildlife, Conservation and/or Ecology and Evolutionary Biology. Topics to be covered will begin with a basic introduction to groups of insects that are aquatic and concepts related to their life-cycle dynamics, trophic guilds and community structure. Coverage will be given to hypotheses that attempt to explain community structure in both lotic (streams, rivers) and lentic (ponds, lake, reservoirs) settings. These lectures will be followed by lectures on organic pollution/eutrophication, heavy metal pollution, runoff and siltation, acidification, and thermal pollution. Changes in aquatic insect community structure will be discussed after reading an original literature source for each class of pollutant. Concluding lectures will deal with designing and maintaining biological monitoring networks to aid in decisions for water quality management. Copies of original data will be provided and hands-on, computer-based analyses of the data will give students experience in manipulating data and interpreting results. Weekly assignments will be based on data provided. The course will be web enhanced.
Style: 75% Lecture, 25% Discussion.
Grading: 20% mid exam, 30% final exam, 10% laboratory evaluation, 20% problem solving, 20% other evaluation. Completed design for a field research project
Exam Format: Combination of multiple choice and essay

ENT 4096 Professional Experience Program: Internship
S-N only, 1-3 credit(s), max credits 1, 1 completion allowed; prerequisite: COAFES Jr or sr, complete internship contract available in COAFES Career Services before enrolling, UC only, instr consent;
Instructor: STAFF
Description: Professional experience in entomology firms or government agencies through supervised practical experience; evaluative reports and consultations with faculty advisors and employers.

ENT 4251 Forest and Shade Tree Entomology
3 credit(s);
Instructor: Aukema, Brian Henry
Description: Biology, ecology, population management of forest/shade tree insects. Emphasizes predisposing factors/integrated management. Lecture/lab.
ENT 5041 Insect Ecology  
3 credit(s); prereq Biol 5041 or EBB 5122 or instr consent;  
Instructor: Andow, David  
Description: Student may contact the instructor or department for information.

ENT 5081 Insects, Aquatic Habitats, and Pollution  
A-F only, 3 credit(s); prereq [3005, Biol 3407, FW 2001, EEB 4601] or instr consent;  
Instructor: Ferrington Jr., Leonard Charles  
Description: This course will focus on the effects differing classes of pollutants have on the biology, ecology and community structure of insects that are aquatic. It is intended for (1) upper level undergraduates with interests in ecology, limnology, natural resources management or conservation, and (2) first-year graduate students involved in research projects in Entomology, Water Resources, Fisheries and Wildlife, Conservation and/or Ecology and Evolutionary Biology. Topics to be covered will begin with a basic introduction to groups of insects that are aquatic and concepts related to their life-cycle dynamics, trophic guilds and community structure. Coverage will be given to hypotheses that attempt to explain community structure in both lotic (streams, rivers) and lentic (ponds, lake, reservoirs) settings. These lectures will be followed by lectures on organic pollution/eutrophication, heavy metal pollution, runoff and siltation, acidification, and thermal pollution. Changes in aquatic insect community structure will be discussed after reading an original literature source for each class of pollutant. Concluding lectures will deal with designing and maintaining biological monitoring networks to aid in decisions for water quality management. Copies of original data will be provided and hands-on, computer-based analyses of the data will give students experience in manipulating data and interpreting results. Weekly assignments will be based on data provided.  
Style: 75% Lecture, 25% Discussion.  
Grading: 25% mid exam, 25% final exam, 25% reports/papers, 25% class participation.  
Exam Format: Combination of multiple choice and essay

ENT 5241 Ecological Risk Assessment  
3 credit(s); prereq instr consent;  
Instructor: Andow, David  
Description: Student may contact the instructor or department for information.

ENT 5275 Medical Entomology  
3 credit(s); prereq instr consent;  
Instructor: Munderloh, Ulrike G  
Description: Student may contact the instructor or department for information.

ENT 5351 Insect Pathology  
2 credit(s); prereq 5011;  
Instructor: Kurtti, Timothy J  
Description: This course is an introduction to the diseases of pest and beneficial insects. The emphasis is on the biotechnology of entomopathogenic microbes and their application to microbial control of pest insects. The student will become familiar with the principles of insect pathology and the mechanisms of microbial pathogenesis. The textbook is "Insect Pathology" by Y. Tanada and H.K. Kaya. In addition, the student will read and critically analyze current papers. Oral presentations will be used to summarize these papers for the class. The students will also prepare a report on an entomopathogen of their choice. The objective of this report is to identify the strengths and weaknesses of the pathogen and the prospects for its implementation as a microbial insecticide or a biological control agent. Target audience: advanced undergraduate students in biology; graduate students in entomology, microbiology or ecology.  
Style: 70% Lecture, 30% Discussion.  
Grading: 20% mid exam, 30% final exam, 30% reports/papers, 20% in-class presentation.  
Exam Format: Essay

ENT 5900 Basic Entomology  
3 credit(s); max credits 12; prereq instr consent;  
Instructor: STAFF  
Description: Opportunity to make up certain deficiencies in biological background.

ENT 5910 Special Problems in Entomology  
1-6 credit(s), max credits 10, 10 completions allowed; prereq instr consent;  
Instructor: STAFF  
Description: Individual field, lab, or library studies in various aspects of entomology.

ENT 8061 Scientific Communication and Ethics  
S-N only, 1 credit(s);  
Instructor: Moon, Roger Dean  
Description: Student may contact the instructor or department for information.

ENT 8300 Graduate Seminar  
S-N only, 1 credit(s); prereq instr consent;  
Instructor: Moon, Roger Dean  
Description: This course is intended for Entomology graduate students who need to satisfy their seminar requirement. Students in MS and PhD programs are required to present a thesis proposal seminar in a public seminar to the department. PhD students are also required to present an instructional seminar, where they are to review a non-thesis topic of their choice. Seminars of both kinds are usually scheduled and hosted as a part of the Entomology's Tuesday afternoon seminar series.  
Style: 100% Student Presentation.  
Grading: 100% reports/papers.

ENT 8594 Research in Entomology  
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;  
Instructor: Fallon, Ann M  
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology  
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;  
Instructor: Weller, Susan J.  
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology  
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;  
Instructor: Krischik, Vera Aber  
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology  
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;  
Instructor: Munderloh, Ulrike G  
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology  
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;  
Instructor: Mesce, Karen A  
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology  
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;  
Instructor: Munderloh, Ulrike G  
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology  
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;  
Instructor: Andow, David  
Description: Student may contact the instructor or department for information.
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;
Instructor: Holzenthal,Ralph W
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;
Instructor: Kurtti,Timothy J
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;
Instructor: Ostlie,Kenneth R
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;
Instructor: Spivak,Marla
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;
Instructor: Hutchison PhD,William D.
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;
Instructor: Moon,Roger Dean
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;
Instructor: Ragsdale,David W
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;
Instructor: Heimpel,George Eugene
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;
Instructor: Ferrington Jr,Leonard Charles
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;
Instructor: Kells,Stephen A
Description: Student may contact the instructor or department for information.

ENT 8594 Research in Entomology
S-N only, 1-16 credit(s), max credits 36, 6 completions allowed;
Instructor: Aurkema,Brian Henry
Description: Student may contact the instructor or department for information.

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**Entrepreneurship**

3-306 Carlson School of Management

**ENT 6020 Business Formation**
A-F only, 4 credit(s); prereq MBA student;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

**Environmental Sciences, Policy, and Management**

**ESPM 1001 Freshmen Orientation to Environmental Sciences, Policy, and Management**
A-F only, 1 credit(s);
Instructor: Ferrington Jr,Leonard Charles
Description: Student may contact the instructor or department for information.

**ESPM 1002 Transfer Orientation Seminar**
A-F only, 1 credit(s);
Instructor: STAFF
Description: This required course provides orientation and guidance in planning for students transferring into the ESPM major. Course activities will describe careers, tracks within ESPM, and internships. Skill building provided includes information on searching for jobs and internships and writing of resumes.

**ESPM 1011 Issues in the Environment**
3 credit(s); Meets CLE req of Environment;
Instructor: Blinn,Charles R
Description: This course is an introductory, interdisciplinary survey of environmental issues that explores the connections between environmental sciences, policy, and management and personal, professional, and civic responsibility. On Mondays and Wednesdays, the instructors and a variety of guest speakers will introduce students to topics of current environmental concern, and on Fridays students will discuss these issues in small groups. The course emphasizes the social, political, and economic factors involved in environmental decision-making, and lectures are supplemented with videos and a course web site. The overarching question the course asks is: What should a sustainable society look like, and how should we attempt to achieve it? The specific topics it explores include: population and consumption; energy, climate change, and waste; land use (soils, forests, agriculture, water, and wetlands); and biodiversity (fisheries, wildlife, and endangered and invasive species). The course is intended for first-year students majoring in Environmental Sciences, Policy, and Management and for all students who are interested in the subject and wish to satisfy the University's liberal education requirements for Environment Theme and Citizenship and Public Ethics Theme. The course has no prerequisites and is suitable for students with little or no scientific background.

**ESPM 1012 Issues in the Environment**
3 credit(s); Meets CLE req of Environment;
Instructor: Billmark,Kaycie A
Description: This course is an introductory, interdisciplinary survey of environmental issues that explores the connections between environmental sciences, policy, and management and personal, professional, and civic responsibility. On Mondays and
Wednesday, the instructors and a variety of guest speakers will introduce students to topics of current environmental concern, and on Fridays students will discuss these issues in small groups. The course emphasizes the social, political, and economic factors involved in environmental decision-making, and lectures are supplemented with videos and a course web site. The overarching question the course asks is: What should a sustainable society look like, and how should we attempt to achieve it? The specific topics it explores include: population and consumption; energy, climate change, and waste; land use (soils, forests, agriculture, water, and wetlands); and biodiversity (fisheries, wildlife, and endangered and invasive species). The course is intended for first-year students majoring in Environmental Sciences, Policy, and Management and for all students who are interested in the subject and wish to satisfy the University’s liberal education requirements for Environment Theme and Citizenship and Public Ethics Theme. The course has no prerequisites and is suitable for students with little or no scientific background.

**Style:** 60% Lecture, 40% Discussion.

**Grading:** 15% final exam, 25% reports/papers, 35% special projects, 15% quizzes, 10% class participation.

**Exam Format:** Varies

**ESPM 1425 The Atmosphere**

A-F only, 4 credit(s); prerequisite High school algebra; Credit will not be granted if credit has been received for: GEOG 1425; Meets CLE req of Environment; meets CLE req of Physical Sciences.

**Instructor:** Klink,Katherine

**Description:** Weather is part of our everyday lives, sometimes memorably so, such as when we experience snowstorms, hurricanes, tornadoes, or heat waves. Our society also is increasingly concerned about environmental issues such as ozone depletion and climate change, which have a fundamental atmospheric component. What do we understand about how the atmosphere works? How might our own actions affect weather and climate? Our goals for this course are to: 1) learn about weather and climate, including the physical laws that govern the atmosphere, the current tools and technologies used to study the atmosphere, and to interpret weather and climate data; 2) experience and gain insight into the nature of science and scientific uncertainty; 3) become better able to evaluate critically scientific questions and claims, especially those concerning the human impacts on the atmosphere; 4) understand the limits to what we know about weather, climate, and climate change; and 5) reflect on our roles and responsibilities as agents of local and global environmental change, especially as related to the atmosphere. Goals 1-3 are directly related to the objectives of the Physical Science Core: to learn about key basic concepts and consequences regarding the natural laws, processes, and properties of matter and energy; to use basic research methods such as observation, hypothesis formation/testing, and/or computer simulations; understanding the limits and uncertainty associated with these methods; and to become more informed about the scientific basis of claims about climate and environmental change. Goals 3-5 are directly related to the objectives of the Environment Theme: to inform your understanding of the interrelationships between the non-human environment (e.g., the atmosphere) and human society; to introduce you to important underlying scientific principles within environmental issues, particularly as related to the atmosphere; to consider the possibilities and limitations of various technologies, practices, and policies aimed at adapting to, and/or mitigating, the potentially negative impacts of global climate change; and to reflect on our ethical commitments as global citizens on the issue of climate/environmental change. Questions we will try to answer include: What makes the wind blow? Why don’t all clouds produce rain? What causes thunderstorms and tornadoes? How do satellites work? How does El Niño affect the weather in North America? How do you make a weather forecast? Are human activities really affecting the atmosphere? What is the greenhouse effect, and should we be concerned about it? What do we know about climate change? This course fulfills the CLE Physical Science with Lab Core, and the Environment Theme. Prerequisites: Students are expected to be familiar with pre-college algebra (at the level of the standard University entrance requirement).

**Style:** 60% Lecture, 10% Discussion, 30% Laboratory.

**Grading:** 25% final exam, 30% additional semester exams, 45% laboratory evaluation.

**Exam Format:** multiple choice, short answer

**ESPM 1901 Topics: Freshman Seminar**

3 credit(s); prerequisite Fr; Meets CLE req of Environment;

**Instructor:** Oberhauser,Karen S

**Description:** Student may contact the instructor or department for information.

**ESPM 1901 Topics: Freshman Seminar: Human Impact on the Environments: Then and Now**

3 credit(s); prerequisite Fr; Meets CLE req of Environment;

**Instructor:** Bell, Jay

**Description:** Student may contact the instructor or department for information.

**ESPM 1905 Freshman Seminar**

1 credit(s), max credits 3, 1 completion allowed;

**Instructor:** Cooper, Terence H

**Description:** Student may contact the instructor or department for information.

**ESPM 2401 Environmental Education/Interpretation**

3 credit(s); prerequisite Soph;

**Instructor:** Carlson, Stephanie Paul

**Description:** Class Description: This course will take a foundational view of Environmental Education/Naturalist, its history, theories, methodologies, and practical skills for outdoor teaching with the aim to make students aware of the strengths and weaknesses of the Environmental Education field. Upon completion of this course a student should: 1. Know the historic “roots” of environmental education 2. Develop an understanding of interpretation/naturalist 3. Understand principles of environmental education 4. Use basic ecology with real world applications for teaching 5. Understand relationships among social and natural systems. 6. Apply investigative skills to solve EE problems. 7. Apply Awareness to Action, Environmental Education model. 8. Use parks and other natural/man-made settings to teach EE. 9. Apply Environmental Education to MN’s Graduation Standards. 10. Understand/Applying learning theory to teaching informal EE

**Style:** 60% Lecture, 40% Discussion.

**Grading:** 20% mid exam, 20% final exam, 20% reports/papers, 15% special projects, 5% quizzes, 15% in-class presentation, 5% class participation.

**Exam Format:** short answers, fill in the blank, matching, multiple choice essay and true/false

**ESPM 3000 Seminar on Current Issues for ESPM: Essentials of Env Ldshp-Do You have what it takes?**

A-F only, 1 credit(s), max credits 6, 6 completions allowed; prerequisite Jr;

**Instructor:** Stafford, Susan G

**Description:** Student may contact the instructor or department for information.

**ESPM 3011W Ethics in Natural Resources**

3 credit(s); Meets CLE req of Writing Intensive;

**Instructor:** Nerbonne, Julia Frost

**Description:** Student may contact the instructor or department for information.

**ESPM 3012 Statistical Methods for Environmental Scientists and Managers**

A-F only, 4 credit(s); prerequisite Two yrs of high school math; Credit will not be granted if credit has been received for: STAT 3011; Meets CLE req of Mathematical Thinking;

**Instructor:** Ek, Alan Ryan

**Description:** Student may contact the instructor or department for information.

**ESPM 3106 Ecology of Managed Systems**
3 credit(s); prerequisite BIOL 1001 or BIOL 1009 or HORT 1001 or instructor consent. Credit will not be granted if credit has been received for: ESPM 5108; meets CLE req of Environment.

Instructor: Galatowitsch, Susan M

Description: Student may contact the instructor or department for information.

ESPM 3245 Sustainable Land Use Planning and Policy
A-F only, 3 credit(s); credit will not be granted if credit has been received for: ESPM 5245; meets CLE req of Environment.

Instructor: Davenport, Mae Allen

Description: Student may contact the instructor or department for information.

ESPM 3251 Natural Resources in Sustainable International Development
A-F only, 3 credit(s); credit will not be granted if credit has been received for: ESPM 5251; meets CLE req of Global Perspectives.

Instructor: Current, Dean Alan

Description: International perspectives on resource use in developing countries. Integration of natural resource issues with social, economic, and policy considerations. Overviews of agriculture, forestry, agroforestry, non-timber forest products, water resources, certification, and development issues. Latin American focus but also includes case studies from other developing regions of the world.

Style: 40% Lecture, 25% Discussion, 15% Student Presentation, 20% Guest Speakers

Grading: 35% in-class presentation, 5% class participation. 60% exams

ESPM 3261 Economics and Natural Resources Management
A-F only, 4 credit(s); credit will not be granted if credit has been received for: ESPM 5261; meets CLE req of Environment; meets CLE req of Social Sciences.

Instructor: Kilgore, Mike

Description: This course is designed to give students an understanding of and appreciation for the role economics plays in the management, use, and protection of natural resources. Its focus is to build student capacity to think critically about natural resources using economic decision-making criteria. The course emphasizes the practical application of economic principles and concepts to natural resource problems. The first third of the course focuses on developing an understanding of basic microecononomic concepts. The middle third of the course covers the tools and techniques used to value natural resources and evaluate natural resource projects using economic and financial criteria. The last third of the course extends these economic concepts, tools, and techniques to the management of various natural resources (e.g., forests, water). Prerequisite math skills for this course are limited to solving problems using algebra.

Style: 80% Lecture, 5% Small Group Activities, 15% Guest Speakers

Grading: 33% mid exam, 25% final exam, 9% quizzes, 33% written homework.

ESPM 3271 Environmental Policy, Law, and Human Behavior
A-F only, 3 credit(s); meets CLE req of Civic Life and Ethics; meets CLE req of Social Sciences.

Instructor: Enzler, Sherry Anne

Description: For effective environmental change, we need to understand how human behavior, policy, and governance interact. Can policy become an effective tool for modifying human behavior to achieve environmental change? How do we reduce our environmental footprint with new laws while maintaining human wellbeing? How do human beings respond to laws and policy initiatives resulting in positive changes or unexpected consequences? You will learn the key concepts of government, law, as well as the philosophy and pragmatic operation of democracy. At the same time, you will investigate how law sets the course for influencing human attitudes, values, behaviors and social organization for environmental change. Lectures provide the theoretical concepts and international examples of laws and human behavior based on specific environmental issues. The focus is on international cases, with a few U.S. comparative cases, from the local to global scales. Guest speakers and class discussion provide an opportunity to apply the concepts to interpret concrete examples. To understand the material in action, each student will be involved with a service-learning project, with groups working on global warming, environmental laws, and human behavior.

Style: 20% Lecture, 20% Discussion. In class exercises, service learning

Grading: 10% final exam, 10% reports/papers, 80% quizzes.

Exam Format: short answer and essay

ESPM 3271 Environmental Policy, Law, and Human Behavior
A-F only, 3 credit(s); meets CLE req of Civic Life and Ethics; meets CLE req of Social Sciences.

Instructor: Nelson, Kristen

Description: For effective environmental change, we need to understand how human behavior, policy, and governance interact. Can policy become an effective tool for modifying human behavior to achieve environmental change? How do we reduce our environmental footprint with new laws while maintaining human wellbeing? How do human beings respond to laws and policy initiatives resulting in positive changes or unexpected consequences? You will learn the key concepts of government, law, as well as the philosophy and pragmatic operation of democracy. At the same time, you will investigate how law sets the course for influencing human attitudes, values, behaviors and social organization for environmental change. Lectures provide the theoretical concepts and international examples of laws and human behavior based on specific environmental issues. The focus is on international cases, with a few U.S. comparative cases, from the local to global scales. Guest speakers and class discussion provide an opportunity to apply the concepts to interpret concrete examples. To understand the material in action, each student will be involved with a service-learning project, with groups working on global warming, environmental laws, and human behavior.

Style: 20% Lecture, 20% Discussion. In class exercises, service learning

Grading: 10% final exam, 10% reports/papers, 80% quizzes.

Exam Format: short answer and essay

ESPM 3425 Atmospheric Composition: From Smog to Climate Change
A-F only, 3 credit(s); prerequisite [CHEM 1021, CHEM 1022, PHYS 1011, MATH 1142, MATH 1271, MATH 1281] or equiv or instructor consent; ESPM 1425 recommended.

Instructor: Millet, Dylan Baird

Description: What is the composition of the atmosphere, and why is it changing? In this class we'll examine the processes governing the makeup of Earth's atmosphere and their implications for air pollution, climate, and human welfare. Evolution of the atmosphere; atmospheric structure and transport; biogeochemical cycles of carbon, nitrogen, oxygen, mercury; the greenhouse effect; aerosols; stratospheric ozone loss; oxidizing power of the atmosphere; smog. The movie below shows the 2009 ozone hole over Antarctica [credit: NASA]. Prerequisites: CHEM 1021/1022, PHYS 1011, MATH 1271, or equivalents, or instructor consent.

ESPM 3603 Environmental Life Cycle Analysis
A-F only, 3 credit(s); credit will not be granted if credit has been received for: MGMT 3603.

Instructor: Hill, Jason David

Description: Student may contact the instructor or department for information.

ESPM 3604 Environmental Management Systems and Strategy
A-F only, 3 credit(s); credit will not be granted if credit has been received for: ESPM 5604.

Instructor: Smith, Tim

Description: Environmental threats and opportunities are becoming increasingly important for business. Environmental problems such as climate change, ozone depletion and loss of biodiversity have become important national and international issues. Governments continue to adopt regulations and
standards which influence industrial activity on a daily basis. Banks, insurance companies and other investors have become conscious of liabilities imposed by improper handling of materials and containment of property. Suppliers and customers are also setting their own requirements. With the advent of the Business Charter on Sustainable Development, the European Environmental Management and Audit Scheme and the ISO series of environmental standards, companies are responding to these challenges by establishing structured environmental management systems. This course provides a theoretical and practical framework for understanding and evaluating environmental impacts within business scenarios. The course enables students to effectively assess the strategic and tactical processes associated with environmental, business and policy trends facing today’s organizations.

Style: 60% Lecture, 20% Discussion. Student presentations and group projects
Grading: 20% reports/papers, 40% special projects, 10% quizzes, 10% class participation, 20% other evaluation.
Mid-semester exam(s)

Exam Format: multiple choice, essay, short answers

ESPM 3606W Pollution Prevention: Principles, Technologies, and Practices
A-F only, 3 credit(s); prereq CHEM 1011 or [CHEM 1015, CHEM 1017] or instr consent; Credit will not be granted if credit has been received for: ESPM 5606; Meets CLE req of Writing Intensive;
Instructor: McComas, Cindy Ann
Description: Industrial facilities use raw materials and resources and emit pollutants and wastes. The raw materials and resources used are converted into various forms of pollution through industrial operations. Both purchasing the input materials used and treating and disposing of the pollutants and wastes generated represent costs to a company. In this class, the methods by which a company can reduce both input materials and pollution and wastes are covered including better management, process and product modification, use of alternative materials and redirecting materials and energy flows. The course is comprised of (1) Overview of industrial emissions and the technologies to treat and reduce them, (2) Pollution prevention planning and implementation, (3) A field trip to a company, (4) Presentations on the industrial pollution prevention practices and (5) Group assessment project.
Style: 60% Lecture, 20% Discussion. Student presentations and group work
Grading: 20% mid exam, 20% reports/papers, 50% special projects, 10% class participation.

ESPM 3612W Soil and Environmental Biology
3 credit(s); prereq Biol 1009 or equiv, Chem 1021 or equiv; 2125 recommended; Meets CLE req of Writing Intensive;
Instructor: Allan, Deborah L
Description: Student may contact the instructor or department for information.

ESPM 4041W Problem Solving for Environmental Change
A-F only, 4 credit(s); prereq ESPM sr; Meets CLE req of Writing Intensive;
Instructor: Nelson, Kristen
Description: Each year students in ESPM 4041W work with a client to perform ‘real world’ projects involving land use planning. Students work in groups of four to six people. The group’s goal is to gather data relevant to the client’s objectives, analyze the data and, based on the data, make recommendations for future use. Students will produce a final written report for the client, develop a formal presentation describing the findings, and present their findings to the client group.

ESPM 4061W Water Quality and Natural Resources
3 credit(s); Meets CLE req of Writing Intensive;
Instructor: Perry, Jim A
Description: The science and art of water quality decision making, with a strong international focus. We discuss ecology of aquatic ecosystems, how they are valuable to society, how they are changed by landscape management, and how we make informed decisions about that management. We rely heavily on case studies, impaired waters and the TMDL process, and student engagement in simulating water quality decision making.
Style: 30% Lecture, 30% Discussion, 25% Guest Speakers
Grading: 20% mid exam, 20% final exam, 20% special projects, 20% in-class presentation, 20% class participation.

ESPM 4093 Directed Study
1-7 credit(s), max credits 20, 20 completions allowed; prereq instr consent;
Instructor: Waterhouse, Beth E
Description: Student may contact the instructor or department for information.

ESPM 4093 Directed Study
1-7 credit(s), max credits 20, 20 completions allowed; prereq instr consent;
Instructor: Nelson, Kristen
Description: Student may contact the instructor or department for information.

ESPM 4093 Directed Study
1-7 credit(s), max credits 20, 20 completions allowed; prereq instr consent;
Instructor: Rosen, Carl Jay
Description: Student may contact the instructor or department for information.

ESPM 4093 Directed Study
1-7 credit(s), max credits 20, 20 completions allowed; prereq instr consent;
Instructor: Cooper, Terence H
Description: Student may contact the instructor or department for information.

ESPM 4093 Directed Study
1-7 credit(s), max credits 7, 7 completions allowed; prereq instr consent;
Instructor: Rosen, Carl Jay
Description: Student may contact the instructor or department for information.

ESPM 4094 Directed Research
1-7 credit(s), max credits 7, 7 completions allowed; prereq instr consent;
Instructor: Cooper, Terence H
Description: Student may contact the instructor or department for information.

ESPM 4094 Directed Research
1-7 credit(s), max credits 7, 7 completions allowed; prereq instr consent;
Instructor: Cooper, Terence H
Description: Go to your Gold Pass account - left side to locate link to ESPM internship form. Fill out form online and permission number will be sent to you.

ESPM 4216 Contaminant Hydrology
A-F only, 2 credit(s);
Description: Student may contact the instructor or department for information.

ESPM 4295W GIS in Environmental Science and Management
A-F only, 4 credit(s); prereq FR 3131 or instr consent; Meets CLE req of Writing Intensive;
Instructor: Jenks, Andrew Carl
Description: Application of spatial data inventory/analysis in complex environmental planning problems. Spatial data collection, database development methods including GPS, DLG, TIGER, NWI data, spatial analysis. Topics identified by non-University partners.

ESPM 4608 Bioremediation
A-F only, 3 credit(s); prereq [BIOL 1001 or BIOL 1009], CHEM 1011; Credit will not be granted if credit has been received for: ESPM 5608;
Instructor: Schilling, Jonathan Scott
Description: Bioremediation is the use of organisms, often microbes or their enzymes, to detoxify contaminants either in the field (in situ) or in containment facilities (ex situ). This is a rapidly-growing field that also has a long tradition. This Bioremediation course aims to introduce the fundamentals, survey the discipline, and discuss contemporary applications. In the course, we will 1) define 'contaminants', sources and environmental fates, 2) characterize biological organisms, pathways and catalysts utilized in bioremediation, and 3) discuss site inspection practices, bioremediation technologies and application in real-world situations. Teaching will combine lectures with hands-on experiences. Students will also be assigned out-of-class projects (with worksheets) that will be either solo or in groups, and a short presentation will be required along with a short writing assignment.
Style: 60% Lecture, 20% Discussion. class projects
Grading: 45% mid exam, 15% final exam, 10% class participation, 30% problem solving.
Exam Format: multiple choice, short and long answer, diagnostics

ESPM 5061 Water Quality and Natural Resources
3 credit(s); prereq Grad student or instr consent;
Instructor: Perry, Jim A
Description: Review and discussion of recent literature in field complements the material covered in ESPM 4061;
co-attendance is required. 4061 also addresses the science and art of water quality decision making, with a strong international focus. We discuss ecology of aquatic ecosystems, how they are valuable to society, how they are changed by landscape management, and how we make informed decisions about that management. We rely heavily on case studies, impaired waters and the TMDL process, and student engagement in simulating water quality decision making. Workload is in addition to that listed for ESPM 4061W
Style: 10% Lecture, 60% Discussion, 30% Student Presentation.
Grading: 20% mid exam, 20% final exam, 30% in-class presentation, 30% class participation.

ESPM 5108 Ecology of Managed Systems
A-F only, 4 credit(s); prereq Sr or grad student; Credit will not be granted if credit has been received for: ESPM 3108;
Instructor: Galatowitsch, Susan M
Description: Student may contact the instructor or department for information.

ESPM 5245 Sustainable Land Use Planning and Policy
A-F only, 3 credit(s); prereq Grad student or instr consent; Credit will not be granted if credit has been received for: ESPM 3245;
Instructor: Davenport, Mae Allen
Description: Student may contact the instructor or department for information.

ESPM 5251 Natural Resources in Sustainable International Development
A-F only, 3 credit(s); prereq Grad student or instr consent; Credit will not be granted if credit has been received for: ESPM 3251;
Instructor: Current, Dean Alan
Description: International perspectives on resource use in developing countries. Integration of natural resource issues with social, economic, and policy considerations. Overviews of agriculture, forestry, agroforestry, non-timber forest products, water resources, certification, and development issues. Latin American focus but also includes case studies from other developing regions of the world.

ESPM 5261 Economics and Natural Resources Management
A-F only, 4 credit(s); prereq Grad student or instr consent; Credit will not be granted if credit has been received for: ESPM 5261;
Instructor: Kilgore, Mike
Description: This course is designed to give students an understanding of and appreciation for the role economics plays in the management, use, and protection of natural resources. Its focus is to build student capacity to think critically about natural resources using economic decision-making criteria. The course emphasizes the practical application of economic principles and concepts to natural resource problems. The first third of the course focuses on developing an understanding of basic microeconomic concepts. The middle third of the course covers the tools and techniques used to value natural resources and evaluate natural resource projects using economic and financial criteria. The last third of the course extends these economic concepts, tools, and techniques to the management of various natural resources (e.g., forests, water). Prerequisite math skills for this course are limited to solving problems using algebra.
Style: 80% Lecture, 5% Small Group Activities, 15% Guest Speakers.
Grading: 33% mid exam, 25% final exam, 9% quizzes, 33% written homework.

ESPM 5295 GIS in Environmental Science and Management
A-F only, 4 credit(s); prereq Grad student or instr consent;
Instructor: Jenks, Andrew Carl
Description: Application of spatial data inventory/analysis in complex environmental planning problems. Spatial data collection, database development methods including GPS, DLG, TIGER, NWI data, spatial analysis. Topics identified by non-University partners.

ESPM 5555 Wetland Soils
A-F only, 3 credit(s); prereq 1125 or 2125 or equiv or instr consent; Concurrent registration is required (or allowed) in 4511 recommended; Credit will not be granted if credit has been received for: SOIL 5555;
Instructor: Wheeler, Daniel B
Description: Student may contact the instructor or department for information.

ESPM 5603 Environmental Life Cycle Analysis
A-F only, 3 credit(s); prereq [Math 1142 or [Math 1271, Math 1282]], [Econ 1101 or ApEc 1101];
Instructor: Hill, Jason David
Description: Student may contact the instructor or department for information.

ESPM 5604 Environmental Management Systems and Strategy
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: ESPM 3604;
Instructor: Smith, Tim
Description: Environmental threats and opportunities are becoming increasingly important for business. Environmental problems such as climate change, ozone depletion and loss of biodiversity have become important national and international issues. Governments continue to adopt regulations and standards which influence industrial activity on a daily basis. Banks, insurance companies and other investors have become conscious of liabilities imposed by improper handling of materials and contamination of property. Suppliers and customers are also setting their own requirements. With the advent of the Business Charter on Sustainable Development, the European Environmental Management and Audit Scheme and the ISO series of environmental standards, companies are responding to these challenges by establishing structured environmental management systems. This course provides a theoretical and
practical framework for understanding and evaluating environmental impacts within business scenarios. The course enables students to effectively assess the strategic and tactical processes associated with environmental, business, and policy trends facing today’s organizations.

*Style:* 60% Lecture, 20% Discussion. Student presentations and group projects

*Exam Format:* multiple choice, essay, short answers

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**ESPM 5606 Pollution Prevention: Principles, Technologies, and Practices**

A-F only, 3 credit(s); prereq CHEM 1011 or [CHEM 1015, CHEM 1017] or instr consent; Credit will not be granted if credit has been received for: ESPM 3606W;

*Instructor:* McComas, Cindy Ann

*Description:* Industrial facilities use raw materials and resources and emit pollutants and wastes. The raw materials and resources used are converted into various forms of pollution through industrial operations. Both purchasing the input materials used and treating and disposing of the pollutants and wastes generated represent costs to a company. In this class, the methods by which a company can reduce both input materials and pollution and wastes are covered including better management, process and product modification, use of alternative materials and redirecting materials and energy flows. The course is comprised of (1) Overview of industrial emissions and the technologies to treat and reduce them, (2) Pollution prevention planning and implementation, (3) A field trip to a company, (4) Presentations on the industrial pollution prevention practices and (5) Group assessment project.

*Style:* 60% Lecture, 20% Discussion. Student presentations and group works

*Grading:* 20% mid exam, 20% reports/papers, 50% special projects, 10% class participation.

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**ESPM 5608 Bioremediation**

A-F only, 3 credit(s); prereq [BIOL 1001 or BIOL 1009], CHEM 1011; Credit will not be granted if credit has been received for: ESPM 4608;

*Instructor:* Schilling, Jonathan Scott

*Description:* Bioremediation is the use of organisms, often microbes or their enzymes, to detoxify contaminants either in the field (in situ) or in containment facilities (ex situ). This is a rapidly-growing field that also has a long tradition. This Bioremediation course aims to introduce the fundamentals, survey the discipline, and discuss contemporary applications. In the course, we will (1) define contaminants, sources and environmental fates, 2) characterize biological organisms, pathways and catalysts utilized in bioremediation, and 3) discuss site inspection practices, bioremediation technologies and application in real-world situations. Teaching will combine lectures with hands-on experiences. Students will also be assigned out-of-class projects (with worksheets) that will be either solo or in groups, and a short presentation will be required along with a short writing assignment.

*Style:* 60% Lecture, 20% Discussion. class projects

*Grading:* 45% mid exam, 15% final exam, 10% class participation, 30% problem solving.

*Exam Format:* multiple choice, short and long answer, diagnostics

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**Experimental and Clinical Pharmacology**

7-159 WDH

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**ECP 8100 Seminar**

1 credit(s), max credits 8, 8 completions allowed; prereq SACP grad major in ECP track or instr consent;

*Instructor:* Johnson, PhD, L’Aurelle Anna Lee

*Description:* Student may contact the instructor or department for information.

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**ECP 8200 Research Problems**

1-8 credit(s), max credits 16, 16 completions allowed; prereq Grad SACP major (ECP Track) or instr consent;

*Instructor:* Brandage, Richard

*Description:* Student may contact the instructor or department for information.

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**ECP 8400 Pharmaceutics**

3 credit(s); prereq SACP grad major in ECP track or instr consent;

*Instructor:* Brandage, Richard

*Description:* Student may contact the instructor or department for information.

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**ECP 8430 Advances in Pharmaceutics**

Modeling and Simulation

S-N only, 1 credit(s), max credits 6, 6 completions allowed; prereq Grad student in ECP or PHM or instr consent;

*Instructor:* Brandage, Richard

*Description:* Student may contact the instructor or department for information.

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**ECP 8900 Advanced Topics in Experimental and Clinical Pharmacology**

1-4 credit(s), max credits 8, 4 completions allowed; prereq SACP grad major in ECP track or instr consent;

*Instructor:* Brandage, Richard

*Description:* Student may contact the instructor or department for information.

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**ECP 8900 Advanced Topics in Experimental and Clinical Pharmacology**

1-4 credit(s), max credits 8, 4 completions allowed; prereq SACP grad major in ECP track or instr consent;

*Instructor:* Marino, Susan Ellis

*Description:* Student may contact the instructor or department for information.

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**ECP 8929 Directed Readings in Experimental and Clinical Pharmacology**

1-2 credit(s), max credits 4, 4 completions allowed;

*Instructor:* Peteron, Marnie Lorraine

*Description:* Student may contact the instructor or department for information.

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**ECP 8993 Directed Study in Experimental and Clinical Pharmacology**

1-4 credit(s), max credits 4;

*Instructor:* Brandage, Richard

*Description:* Student may contact the instructor or department for information.

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**ECP 8993 Directed Study in Experimental and Clinical Pharmacology**

1-4 credit(s), max credits 4;

*Instructor:* Jacobson, Pamela Ann

*Description:* Student may contact the instructor or department for information.

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**ECP 8993 Directed Study in Experimental and Clinical Pharmacology**

1-4 credit(s), max credits 4;

*Instructor:* Brandage, Richard C

*Description:* Student may contact the instructor or department for information.

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**ECP 8993 Directed Study in Experimental and Clinical Pharmacology**

1-4 credit(s), max credits 4;

*Instructor:* Tracy, Tim

*Description:* Student may contact the instructor or department for information.
Family Medicine and Community Health
6-240 Phillips-Wangensteen (MMC 381)

FMCH 5960 Basic Research Methods in Family Practice
A-F only, 3 credit(s); prereq Post-MD fellow, instr consent;
Instructor: Yeazel, Mark William
Description: Student may contact the instructor or department for information.

FMCH 5961 Family Medicine Fellows and Junior Faculty Integration Seminar
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed; prereq [Family medicine faculty or fellow], instr consent;
Instructor: Blain, Carole Jeanne
Description: Student may contact the instructor or department for information.

Family Social Science
290 McNeal Hall

FSOS 1101 Intimate Relationships
4 credit(s); Meets CLE req of Social Sciences;
Instructor: Mendenhall PhD, Tai Justin
Description: Intimate Relationships is a course that focuses on the interpersonal dynamics of couples, and on the dynamics of couples in-context. We will explore how intimate relationships evolve and develop and how they succeed or fail. We will talk about a variety of important relationship topics and skills, including dating, hooking-up, cohabitation, marriage, sexual orientation, gender roles & power, communication & conflict resolution, relationship problems (e.g., abuse, infidelity, divorce), and couple enrichment/couples therapy. The course’s principal goal is to provide an overview of these and related topics, and to help you gain a deeper appreciation and awareness of their importance.
Style: 50% Lecture, 10% Film/Video, 20% Discussion, 20% Small Group Activities.
Grading: 33% final exam, 33% reports/papers, 33% quizzes.
Exam Format: Multiple Choice + Essay

FSOS 1301 Cash or Credit: You Need to Know
A-F only, 1 credit(s); prereq Fr or soph or PSEOB;
Instructor: Zuker, Virginia Solis
Description: College students are referred to as "America’s newest class of debtors" by the media. They are targeted for easy-to-get credit cards and also may have large student loans. FSOS 1301 is a course that provides PSEO students, freshmen and sophomore students with factual information about basic money management skills. The great thing about this class is that the topics covered in class can be applied to every day life, even the life that exists outside of college. This is an on-line, interactive learning based class. Class URL: http://www.collegelife.umn.edu/fsos.html
Style: 100% Web Based. Distance Learning, web-based
Grading: 40% reports/papers, 60% quizzes.
Exam Format: Multiple choice

FSOS 2101 Preparation for Working With Families
A-F only, 2 credit(s);
Instructor: Goodman, William Joseph
Description: This course is designed to be a systematic preparation for upper division education, research and field internships, and career possibilities in Family Social Science. Central to the focus of this course is also the advancement of students’ thinking power by utilizing five levels of thinking outlined by Bloom, 1956. These five levels: knowledge, comprehension, application, analysis, evaluation, and synthesis are used in responding to the course text, "Becoming a Helper" by Marianne and Gerald Corey (2007) and workbook assignments. Book and class topics include the following: Are the Helping Professions for You? Getting the Most from Your Education and Training, Stages in the Helping Process, Common Concerns of Beginning Helpers, Ethical Issues Facing Helpers, Values and the Helping Relationship, Cultural Diversity in the Helping Professions, Working in the Community, Working with Groups, Working with the Family, Understanding Life Transitions, Stress and Burnout, and The Challenge of Retaining Your Vitality. To review course requirements, goals and objectives, and additional information about this course, students are encouraged to view the syllabus on the WEB.
Style: 20% Lecture, 40% Discussion, 20% Laboratory.
Grading: PLEASE NOTE that this course uses Contract Grading

FSOS 2103 Family Policy
3 credit(s);
Instructor: Magistad, Beth Maddock
Description: This course will explore the reciprocal linkages between family functioning and public/private policies at the local, state, and federal levels. The course will focus on theoretical frameworks for conceptualizing family policy and roles professionals can play in building and implementing family policy. Students will explore how families contribute to social problems, how families are affected by these problems, and whether families should be involved in policy solutions. Students will assess the consequences policies may have for family well-being with special attention to selected family policy issues.
Course Philosophy: My intent is to engage students in the topic of family policy and to enable family policy to come alive and be seen as real and relevant to the personal and professional lives of the students. I do not intend to have the students complete the class espousing my political views, but rather to explore more fully a range of political perspectives in an attempt to determine their own views on current family issues. Students are evaluated on their ability to articulate a particular view, identify its theoretical underpinnings, support it with empirical findings, and refute alternative views.
Style: 35% Lecture, 5% Film/Video, 20% Discussion, 20% Small Group Activities, 10% Student Presentation, 10% Guest Speakers.
Grading: 26% reports/papers, 30% special projects, 13% quizzes, 16% written homework, 10% class participation.

FSOS 2105 Methods in Family Research
3 credit(s); prereq PSTL 1004 or STAT 1001 or OMS 2550 or ESPY 3264 or STAT 3011 or PSY 4801 or instr consent;
Credit will not be granted if credit has been received for: FSOS 4105;
Instructor: Rueter, Martha A
Description: This course is designed to give you the opportunity to develop the skills you need to be an intelligent consumer of scientifically based information about families. Topics covered include how to access current research on families, the scientific process and components of a well-executed family study, and social, ethical, and contextual factors that make studying families both exciting and challenging.
Style: 35% Lecture, 20% Discussion, 20% Small Group Activities, 25% Guest Speakers.
Grading: 30% mid exam, 30% final exam, 40% written homework.

FSOS 2191 Independent Study in Family Social Science
1-4 credit(s), max credits 12, 12 completions allowed; prereq Soph, instr consent;
Instructor: STAFF
Description: The independent study course is for field, library, and laboratory research in family social science. To topically course content, and readings for the course are developed under the guidance of the supervising faculty member. Prior registration approval is necessary.

FSOS 3101 Personal and Family Finances
3 credit(s); prereq At least soph or instr consent;
Instructor: Solheim, Catherine Ann
Description: The importance of financial management is...
recognized for its major impact on quality of life for individuals and families. This course focuses on personal and family finances, not corporate or government finances. College students' unique challenges and their related decisions will be considered as they impact credit ratings and debt accumulation, two areas in which less than optimal decision-making often results in long-term financial stress.

**Style:** 45% Lecture, 15% Film/Video, 15% Discussion, 10% Small Group Activities, 15% Guest Speakers

**Grading:** 25% final exam, 27% special projects, 5% quizzes, 25% additional semester exams, 5% class participation, 13% problem solving. Class participation = on-line discussions Three exams plus comprehensive final exam Problem solving = case studies Special project = personal financial planner

**Exam Format:** Multiple choice

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**FSOS 3101 Personal and Family Finances**

3 credit(s); prerequisite At least soph or instr consent; Instructor: Katras, Mary Jo Barl

**Description:** This is a three-credit core course in the Family Social Science bachelor's major. It is required for the major and is also appropriate for those who are interested in gaining practical knowledge of personal finance. This course focuses on personal and family finances, not corporate or government finances. It will address financial pitfalls such as too much debt and investing scams. However, the focus is on financial strategies and tools, economic security, and ways to build assets.

**Style:** 100% Web Based.

**Grading:** 25% final exam, 15% quizzes. Weekly on-line discussion--15% Case Applications--15% Personal Financial Planner--30%

**Exam Format:** Multiple Choice

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**FSOS 3102 Family Systems and Diversity**

3 credit(s); prerequisite At least soph or instr consent; Credit will not be granted if credit has been received for: FSOS 5101; Meets CLE req of Diversity and Soc Justice US; meets CLE req of Social Sciences; Instructor: Xiong PhD, Zha Blong

**Description:** This course examines family systems across the lifespan using a variety of family theories (i.e., the family systems theory, the human ecology theory, the family development theory, etc.). It introduces students to diversity issues related to gender, class, ethnicity/race, sexual orientation, disability, as well as emergent family forms (i.e., cohabitation, divorce, single parenthood, and remarriage) in the context of the latest research.

**Style:** 50% Lecture, 15% Film/Video, 10% Discussion, 25% Small Group Activities.

**Grading:** 26% mid exam, 26% final exam, 28% reports/papers, 13% quizzes, 6% written homework.

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**FSOS 3104 Global and Diverse Families**

3 credit(s); prerequisite At least soph or instr consent; Credit will not be granted if credit has been received for: FSOS 4102; Meets CLE req of Global Perspectives; meets CLE req of Social Sciences; Instructor: Xiong PhD, Zha Blong

**Description:** This course focuses on family dynamics of various racial/ethnic populations across the world, including the United States, in the contexts of global economic, political and socio-cultural processes. The course introduces students to a variety of theoretical frameworks (i.e., cultural variant vs. cultural deviant, family ecological) to question, examine, and understand the interdependence of family, kin, racial, cultural, class, communal, educational, social, religious, political and economic systems within and across countries. In addition, it also helps students to recognize personal, social, cultural, mass media, and other barriers to understanding the family life of people in various cultural, racial and ethnic groups. c. To recognize key ways family and kin are important to people in various cultural, racial and ethnic class groups. d. To understand key dynamics and effects on families of various ?isms? (racism, sexism, ethnocentrism, ageism, heterosexism), privilege, discrimination, obliviousness and ignorance. e. To understand key effects of families around the world of governmental policies of the U.S. and of other international governments. f. To understand important elements and consequences of personal and institutionalized racism.

**Style:** 50% Lecture, 15% Film/Video, 10% Discussion, 15% Small Group Activities, 5% Student Presentation, 5% Guest Speakers.

**Grading:** 14% mid exam, 14% final exam, 21% reports/papers, 7% quizzes, 28% additional semester exams, 6% attendance, 10% reflection paper. Extra credit assignments worth up to 20 points will be assigned to students to complete throughout the semester.

**Exam Format:** All exams include multiple choice and true/false items only.

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**FSOS 3104 Global and Diverse Families**

3 credit(s); prerequisite At least Soph or instr consent; Credit will not be granted if credit has been received for: FSOS 4102; Meets CLE req of Global Perspectives; meets CLE req of Social Sciences; Instructor: Powell, Sharon Elizabeth

**Description:** Student may contact the instructor or department for information.

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**FSOS 3105 Independent Study in Family Social Science**

1-5 credit(s); max credits 12, 12 completions allowed; prerequisite Jr, instr consent; Instructor: STAFF

**Description:** The independent study course is for field, library, and laboratory research in family social science. The topics, course content, and readings for the course are developed under the guidance of the supervising faculty member. Prior registration approval is necessary.

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**FSOS 3425 Alcohol and Drugs: Families and Culture**

3 credit(s); Credit will not be granted if credit has been received for: FSOS 5426.

**Instructor:** Jankord, John Lamont

**Description:** This survey course provides an introduction to the psychology and sociology of psychoactive drug use, abuse, and addiction, in contemporary American society. While this is not a skill development or clinical course, the relationships between individual, family, and socio-cultural dimensions of drug use behavior will be explored. The bio-psycho-socio-spiritual model is used to conceptualize addiction. Special attention is given to variables of ethnicity, gender, sexuality, and social class.

Lectures, readings, large and small group discussions, student presentations, and individual research and writing projects are used to advance student knowledge and understanding.

**Style:** 23% Lecture, 15% Film/Video, 22% Discussion, 15% Small Group Activities, 15% Student Presentation, 10% Guest Speakers.

**Grading:** 14% mid exam, 14% final exam, 14% reports/papers, 6% special projects, 8% attendance, 14% journal, 14% reflection paper, 7% in-class presentation, 9% class participation.

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**FSOS 3429 Counseling Skills Practicum I**

3 credit(s); Credit will not be granted if credit has been received for: FSOS 5429; Instructor: Meyer, Cynthia Jo

**Description:** This course is designed to provide students the listening skills necessary to establish a helping relationship and to promote the personal growth and development of people they will be helping in their future work. It helps students develop skills that are critical in helping other people, including individuals, couples and families. Through class lecture, practice, written exercises, and discussion, this course focuses both on self-awareness about one’s desire to help others as well as developing basic skills in helping others.

**Style:** 50% Lecture, 25% Discussion. skills practice

**Grading:** 30% final exam, 25% reports/papers, 10% special
FSOS 3429 Counseling Skills Practicum I
3 credit(s); Credit will not be granted if credit has been received for: FSOS 5429;
Instructor: Jankord, John Lamont
Description: This course is designed to provide students with the basics necessary to establish a helping relationship and to promote the professed goals and objectives of the people they will see in their future work. The course will provide students with the basics of joining and assist in the development of interpersonal skills necessary to establish a helping relationship. Effective helping skills can be learned, therefore, the greatest part of the course will be spent on the teaching and practice of basic counseling skills, which have been found to be critical in helping people reach their goals and objectives. An additional benefit of this training process may be increased self-awareness of the participants. It seems essential that all people who wish to help others are aware of their strengths, abilities, growth areas, and their needs and motivations to help others. This will be an involving course in which the demands are personal and interpersonal. It is anticipated that the counseling skills learned in this course (as well as the self-awareness developed) will be useful both professionally and personally.
Style: 35% Lecture, 25% Film/Video, 20% Small Group Activities, 20% Student Presentation.
Grading: 15% final exam, 10% reports/papers, 30% written homework, 15% attendance, 15% reflection paper, 15% in-class presentation.
Exam Format: This exam will focus on material covered in class discussion, and all assigned reading material. The general format of this test will include multiple-choice, true/false, and short answer, short essay.

FSOS 4101 Sexuality and Gender in Families and Close Relationships
3 credit(s); prereq At least jr or instr consent;
Instructor: Meyer, Cynthia Jo
Description: Sexuality and Gender in Families and Close Relationships provides students an opportunity to learn about current research in the field of sexuality, develop comfort in applying this information in professional settings, utilize and develop critical thinking skills to examine evidence and biases in the field of sexual science, and to clarify and confirm sexual values as well as understand the impact these values have on one's personal and professional relationships. A variety of topics will be covered including family communication, sexuality education, body image, gender development and development of gender roles, sexuality research, developing healthy sexuality in children, adolescent sexuality, attraction and intimacy, mate selection and other sexuality related topics of importance to relationships and families.
Style: 60% Lecture, 30% Discussion. small group presentations and film
Grading: 30% mid exam, 30% final exam, 20% reports/papers, 10% special projects, 10% class participation.
Exam Format: multiple choice

FSOS 4104W Family Psychology
3 credit(s); Credit will not be granted if credit has been received for: FSOS 5429;
Instructor: Jankord, John Lamont
Description: Family Psychology addresses processes that take place in families of origin, families of choice and other close relationships within diverse social contexts. Emphasis is place on evaluating current research on family dynamics within and across generations. In addition to looking at Family Systems Theory, specific topics include: family rituals, biology and family interactions, marital interactions, adoption, lesbian and gay families, aging, and family therapy. While the emphasis is on understanding current family research, the course also focuses on ways the material can be applied to the student's family and relationships as well as professional interactions with clients. Family Psychology is a writing intensive course which means that the course grade is directly tied to both the quality of writing as well as knowledge of the subject matter.
Style: 50% Lecture, 40% Discussion, films and videos
Grading: 30% final exam, 60% reports/papers, 5% in-class presentation, 5% class participation.
Exam Format: multiple choice and short essay

FSOS 4153 Family Financial Counseling
A-F only, 3 credit(s); prereq [3101, 3102, 3429] or instr consent;
Instructor: Zuiker, Virginia Solis
Description: Financial counseling issues are studied with an emphasis on the role of the financial counselor. This course emphasizes the development of professional skills for assisting individuals and families to cope with financial concerns in their day-to-day lives. This course is designed to increase awareness and knowledge of the characteristics of persons in serious financial difficulties, complexity of factors affecting such situations, desirable relationships between the helper and the helped, and community agencies and organizations with appropriate resources. A basic knowledge of family finance is expected. Students completing this course are eligible to take the Accredited Financial Counselor (AFC) exam administered by the Institute for Personal Finance (IPF). Successful completion of the two courses does not equate passing the Accredited Financial Counselor exam.
Style: 40% Lecture, 5% Film/Video, 20% Discussion, 10% Small Group Activities, 10% Student Presentation, 10% Guest Speakers, 5% Web Based.
Grading: 41% mid exam, 20% reports/papers, 27% written homework, 12% class participation.

FSOS 4155 Parent-Child Relationships
A-F only, 3 credit(s); prereq At least jr or instr consent;
Instructor: Magistad, Beth Maddock
Description: This course will cover history, theories, research, and contemporary practices of parent-child relationships in diverse families across the life span. Students will apply theories studied in class to parent-child observations. The course helps to prepare students for professional work in education, social work and other human service occupations as well as to examine parenting from a personal perspective.
Style: 65% Lecture, 10% Film/Video, 10% Discussion, 10% Small Group Activities, 5% Student Presentation.
Grading: 13% mid exam, 13% final exam, 15% reports/papers, 15% special projects, 8% written homework, 26% additional semester exams, 2% in-class presentation, 7% class participation.
Exam Format: Multiple choice

FSOS 4160H Honors Capstone Project
A-F only, 2 credit(s), max credits 4; prereq FSOS honors;
Instructor: STAFF
Description: Individualizes the honors experience by connecting aspects of major program with special academic interests.

FSOS 4191 Independent Study in Family Social Science
1-4 credit(s), max credits 12, 12 completions allowed; prereq Sr, instr consent;
Instructor: STAFF
Description: The independent study course is for field, library, and laboratory research in family social science. The topics, course content, and readings for the course are developed under the guidance of the supervising faculty member. Prior registration approval is necessary.

FSOS 4294 Research Internship
1-4 credit(s), max credits 4, 1 completion allowed; prereq [FSOS major, at least Jr] or instr consent;
Instructor: STAFF
Description: Students work on research projects with Family Social Science faculty that may include research planning, proposal writing, literature review, data collection, data coding and/or cleaning, data analysis and research reporting.

FSOS 4296 Field Study: Working With Families
S-N only, 1-12 credit(s), max credits 12. 4 completions allowed; prereq [2101, at least Jr] or instr consent;
Instructor: Goodman,William Joseph
Description: This course consists of 180 hours of directed paraprofessional work experience related to the student's applied interest. While the unit of focus is on families throughout this course, student involvement in agencies may range from working with the Minnesota State Legislature (Family Policy) to Family Financial Counseling (Family Economics) to Nursing Homes (Family Health Care). A multitude of Minnesota State, National, and International social service agencies are utilizing in providing students with an experience that best advances their thinking and working. This course is further designed to integrate the whole of a student's undergraduate work by requiring students to complete a professional portfolio suitable for use during job interviews upon graduation. To review course requirements, goals and objectives, and additional information about this course, students are encouraged to view the syllabus on the WEB. This course is for Family Social Science undergraduate majors only.
Style: 100% Discussion.
Grading: 5% in-class presentation, 5% laboratory evaluation, 90% other evaluation. community service

FSOS 5032 Family Systems Theories and Interventions
3 credit(s); prereq Grad student or instr consent;
Instructor: Wielen,Elizabeth
Description: The purpose of this course is to carefully examine systemic and cybernetic frameworks as they apply to diverse families. The course will help students think systemically about families across multiple ecological systems. Students will also learn to identify the crucial epistemological issues in both theoretical and applied areas of family science. Students will be introduced to the major theoretical frameworks that inform family scientists and clinicians. Learning activities will incorporate a variety of pedagogical approaches including experiential role-playing, guest presenters, multimedia, field work, research projects, reading groups, and class discussion.

FSOS 5193 Directed Study in Family Social Science
1-6 credit(s), max credits 6, 1 completion allowed; prereq FSOS or grad student in related field;
Instructor: STAFF
Description: The directed study course is for field, library, and laboratory research in family social science. The topics, course content, and readings for the course are developed under the guidance of the supervising faculty member. Prior registration approval is necessary.

FSOS 5429 Counseling Skills Practicum I
3 credit(s); Credit will not be granted if credit has been received for: FSOS 3429;
Instructor: Meyer,Cynthia Jo
Description: This course is designed to provide students the listening skills necessary to establish a helping relationship and to promote the personal growth and development of people they will see in their future work. It helps students develop skills that are critical in helping other people, including individuals, couples and families. Through class lecture, practice, written exercises, and discussion, this course focuses both on self-awareness about one's desire to help others as well as developing basic skills in helping others.
Style: 50% Lecture. 20% Discussion. skills practice
Grading: 30% final exam, 25% reports/papers, 10% special projects, 15% class participation, 20% other evaluation. Homework assignments
Exam Format: multiple choice and short essay

FSOS 8001 Conceptual Frameworks in the Family
3 credit(s); prereq Family course or instr consent;
Instructor: Danes,Sharon M
Description: This course focuses on major theoretical and conceptual models used to study families. Through readings, progressive projects, and small group interactions, unique concepts, propositions, assumptions, and limitations of family theories will be studied. Assignments will challenge you to critically interpret the theoretical applications within assigned and student-selected family research areas.
Style: 40% Lecture, 20% Discussion, 10% Small Group Activities, 25% Student Presentation, 5% Guest Speakers.
Grading: 25% reports/papers, 10% special projects, 25% reflection paper, 20% in-class presentation, 20% class participation.

FSOS 8007 Ethical Issues and Moral Dilemmas in Family Life
3 credit(s);
Instructor: Doherty,William J
Description: Student may contact the instructor or department for information.

FSOS 8014 Quantitative Family Research Methods II
3 credit(s); prereq [[5014 or equiv], [8001 or equiv], two stat courses] or instr consent;
Instructor: Rueter,Martha A
Description: This course is designed to prepare you to become an independent quantitative family researcher. It is assumed that students taking this course have a solid foundational knowledge of quantitative research methods. In this course, we will build on your knowledge of quantitative methods to help you develop the additional skills and knowledge necessary to design, fund, and properly manage your own family research projects. One of the vehicles for learning is the preparation of a National Institutes of Health R01 grant application. This application covers each component of a well designed research study. Properly completing the application provides an excellent opportunity to directly apply the full range of skills needed to become a family researcher.
Style: 30% Lecture, 25% Discussion, 20% Small Group Activities, 10% Student Presentation, 5% Guest Speakers, 10% Web Based.
Grading: 80% reports/papers, 20% in-class presentation.

FSOS 8031 Family of Origin
S-N only, 3 credit(s); prereq Preference given to marriage and fam therapy students;
Instructor: Goodman,William Joseph
Description: COURSE DESCRIPTION This course provides an in-depth study of each student's families-of-origin in a process orientated setting of fellow students and a clinical, family therapy supervisor. Experienced in a seminar format, this course is primarily designed to assist students with a unique opportunity to explore, study, and understand their own families of origin over four generations. Few opportunities exist for an extensive examination of families of origin by family professionals in training with a focus on professional applicability. The intent of this course is to provide an environment conducive to such exploration. COURSE OBJECTIVES 1. Identify personal assumptions about families based on personal families of origin.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
and how these interface with professional roles as a marriage and families therapist, families life educator, families researcher, or other families service professional. 2. Utilize published and personal resources pertaining to families of origin therapy, use-of-self in therapy, and genograms in the practice of couple and families therapy and family related careers. 3. Identify and understand structures and dynamics of families of origin, covert and overt rules, covert and overt roles, multiple myths, multiple and perhaps conflicting loyalties, diverse boundaries, patterns of intimate interaction, economic and political influences, and experiences of loss. 4. Appreciate the diversity of families of origin of those students utilizing genographic material different from, yet inclusive of, blood lines.

Style: 10% Lecture, 40% Discussion, 50% Student Presentation.
WORKLOAD Presentation of Families. Each student will have an entire class session in which to present their families of origin in a PowerPoint format. The first half of the session is primarily reserved for the actual presentation of your family
Grading: 33% special projects, 33% attendance, 34% class participation. Because of the personal nature and revelation expected in this course, the course is graded S/N. Learners are expected to attend all class meetings, interact actively with other learners, and present their project on their families of origin.

FSOS 8039 Clinical Interventions for Couples
A-F only, 3 credit(s); prereq 8032 or equiv or instr consent;
Instructor: Harris,Steven Michael
Description: This course is designed to provide therapists-in-training with advanced theoretical and evidence-based information regarding couple and marital therapy, and the relational treatment of sexual dysfunction. Emphasis will be placed on relationship processes that impact sexual functioning and sexual identity. The course will also briefly touch on medical interventions for sexual dysfunctions of organic etiology. Concepts of intimacy and sexuality will be differentiated and discussed in detail. Students are encouraged to be open to helping create a learning environment that is built upon critical thinking, self-disclosure, collegiality and respect.
Style: 5% Lecture, 10% Film/Video, 65% Discussion, 5% Small Group Activities, 15% Student Presentation.
Grading: 40% reports/papers, 15% special projects, 35% in-class presentation, 10% class participation.

FSOS 8193 Directed Study in Family Social Science
1-6 credit(s); max credits 12, 12 completions allowed; prereq Doctoral student in FSOS or related field;
Instructor: STAFF
Description: Directed study for a doctoral student in FSOS or related field.

FSOS 8200 Orientation for Family Social Science
S-N only, 1 credit(s); prereq instr consent ;
Instructor: McCulloch,B. Jan
Description: Orientation of new students in the graduate program in Family Social Science. In a setting of open discussion and questioning, students will obtain an introduction to the department, the field of family science, the academic setting, and roles they will play as Family Social Science Graduate Students and as family science professionals. They also participate in individual "faculty chats" with FSOS faculty and the Wednesday noon FSOS colloquium series.
Style: 40% Lecture, 30% Discussion, 30% Guest Speakers. Students also participate in "Faculty Chats" and the Wednesday noon FSOS colloquium series.
Grading: This is a S/N course
Exam Format: There are no exams for this course.

FSOS 8295 Family Therapy Practicum
S-N only, 1-12 credit(s), max credits 12, 1 completion allowed; prereq Marriage and family therapy student;
Instructor: Craft,Shonda Marie
Description: This course is designed to provide you with group supervision in addition to the supervision you receive at your clinical placement site. Bi-monthly supervision will consist of regular check-ins and case presentations as well as clinical discussions guided by a range of conceptual and theoretical frameworks, clinical models, and areas of learning specific to your developmental needs as a clinician.
Style: 100% Discussion.
Grading: 100% other evaluation.

FSOS 8296 Family Therapy Internship
S-N only, 1-21 credit(s), max credits 21, 1 completion allowed; prereq 8295, marriage and family therapy student;
Instructor: Craft,Shonda Marie
Description: This course is designed to provide you with supervision during your internship experience. Frequency, orientation, and supervision structure will be determined in conjunction with your supervisor.
Style: 100% Discussion.
Grading: 100% other evaluation.

FSOS 8297 Supervision of Supervision
S-N only, 1-3 credit(s), max credits 12, 12 completions allowed; prereq MFT student, instr consent;
Instructor: Minor,Brier Miller
Description: This is an experiential practicum course that covers two semesters, in which students have opportunities providing clinical supervision of masters students or masters level therapists in group or individual settings. During the supervision practicum, students will engage in 18 hours (2 hours per month) of “supervision of supervision” or mentoring of their work. This meets partial requirements for becoming AAMFT Approved Supervisors.
Style: 75% Laboratory, 25% Small Group Activities. This practicum experience can be tailored to the students’ needs and time constraints.
Grading: 50% attendance, 50% class participation. This is a pass/fail class that is graded on participation through supervision practicum and mentoring of that experience.

FSOS 8560 Advanced Clinical Topics in Marriage and Family Therapy
A-F only, 1-6 credit(s), max credits 36, 6 completions allowed; prereq FSoS PhD student or instr consent ;
Instructor: Wieling,Elizabeth
Description:

FSOS 8755 Master's Paper: Plan B Project
S-N only, 1-6 credit(s), max credits 6, 1 completion allowed; prereq FSoS MA student;
Instructor: STAFF
Description: Graduate faculty work with students on research for Plan B paper.

FSOS 8794 Directed Research in Family Social Science
1-6 credit(s), max credits 12, 12 completions allowed; prereq Grad FSoS major, instr consent ;
Instructor: STAFF
Description:

Finance
3-122 Carlson School of Management

FINA 3001 Finance Fundamentals
A-F only, 3 credit(s); prereq ACCT 2050, OMS 2550; Credit will not be granted if credit has been received for: APEC 3501;
Instructor: STAFF

FINA 3001 Finance Fundamentals
A-F only, 3 credit(s); prereq ACCT 2050, OMS 2550; Credit will not be granted if credit has been received for: APEC 3501;
FINA 6242 Advanced Corporate Finance Analysis and Decisions
A-F only, 4 credit(s); prereq 6241, MBA student;
Instructor: STAFF

FINA 6242W Corporate Investment Decisions
A-F only, 4 credit(s); prereq 3001, 4121, 4231, 4422, 4522, CSOM major; Meets CLE req of Writing Intensive;
Instructor: STAFF
Description: Focuses on efficiently managing working capital and fixed assets. Cases illustrate some of the topics: working capital management, making capital budgeting decisions, targeting/evaluating firm performance, assessing mergers/acquisitions.

FINA 6231 Debt Markets, Interest Rates, and Hedging
A-F only, 2 credit(s); prereq MBA 6230, MBA student;
Instructor: STAFF

FINA 6241 Corporate Finance Analysis and Decisions
A-F only, 4 credit(s); prereq MBA 6230, MBA student;
Instructor: STAFF
Description: Theoretical/applied understanding of corporate financial decisions. Adjusted present value, economic value added options. Impact of financing decisions on real asset valuation, managerial incentives, corporate strategy.

FINA 6242 Advanced Corporate Finance Analysis and Decisions
A-F only, 4 credit(s); prereq 6241, MBA student;
Instructor: STAFF
Description: Theory/practice of efficiently managing working capital, fixed assets. Emphasizes mergers/acquisitions, corporate restructuring, real options. Use of derivatives as financing tools, in deal structure.
Financial Mathematics
127 Vincent Hall

FM 5001 Preparation for Financial Mathematics I
3 credit(s); prereq Grad MFM major or MFM program director approval;
Instructor: Adams, Scot Robert
Description: Student may contact the instructor or department for information.

FM 5011 Mathematical Background for Finance I
4 credit(s); prereq [5001, 5002] with grade of at least B or [MFM program director approval, grad MFM major];
Instructor: Adams, Scot Robert
Description: Student may contact the instructor or department for information.

FM 5021 Mathematical Theory Applied to Finance I
4 credit(s); prereq [5011 or Concurrent registration is required (or allowed) in 5011], grad MFM major, program director approval;
Instructor: Tolmasky, Carlos
Description: Student may contact the instructor or department for information.

FM 5031 A Practitioner's Course in Finance I
4 credit(s); prereq [5021 or Concurrent registration is required (or allowed) in 5021], grad MFM major, program director approval;
Instructor: Morton, Blaise Grayson
Description: Student may contact the instructor or department for information.

FM 5091 Computation, Algorithms, and Coding in Finance I
3 credit(s); prereq Grad MFM major, program director approval;
Instructor: Prouty, Christopher William
Description: Student may contact the instructor or department for information.

Finnish
192 Klaeber Court

FIN 1001 Beginning Finnish
5 credit(s); Credit will not be granted if credit has been received for: FIN 4003;
Instructor: Karvonen, Daniel
Description: Come study the language of sauna, Sibelius, and Nokia! Finnish is unrelated to most languages in Europe and may seem a bit exotic at first. There are no words for “the” or “a,” and there’s only a single pronoun for both “he” and “she.” But you can learn to spell Finnish in just a few minutes, since words in Finnish are written pretty much like they are pronounced. Much of class time will focus on interactive communicative activities, with students working in pairs or in groups. You’ll also learn about Finnish culture via video clips of real-life situations in Finland and other authentic cultural materials such as songs and movies. The main textbook for the course is “Supisuomea” (chapters 1-5), which is accompanied by CDs and a video, which will be used in class. You’ll also learn both the written and spoken varieties of Finnish, which are quite different from one another. Qualified students may register for this course under the 4001 designator for 2 credits (and reduced tuition).
Style: 25% Lecture, 5% Film/Video, 70% Small Group Activities. interactive exercises
Grading: 10% final exam, 21% reports/papers, 30% quizzes, 6% in-class presentation, 21% class participation, 12% other evaluation. oral interviews
Exam Format: essay, short answer, matching
FW 4001 Biometry
A-F only, 4 credit(s); prerequisite Math 1031;
Instructor: Cohen, Yosef
Description: Student may contact the instructor or department for information.
Style: 30% Lecture, 40% Laboratory.
Grading: 15% midterm exam, 20% final exam, 20% reports/papers, 10% special projects, 10% quizzes, 15% class participation, 15% problem solving.
Exam Format: Essay

FW 4001 Orientation in Fisheries, Wildlife, and Conservation Biology
A-F only, 1 credit(s);
Instructor: Cuthbert, Francesca J
Description: Student may contact the instructor or department for information.

FW 4003 Intermediate Finnish
2 credit(s); prerequisite 1004 in another language or passing score on LPE or grad student; Credit will not be granted if credit has been received for: FIN 1003;
Instructor: Karvonen, Daniel
Description: This is an intermediate course that requires that you've taken a year of college-level Finnish or have equivalent knowledge of the language. The main textbook for the course is "Elaman suolaa: Suomen kielen alkeita 2" (chapters 21-30), which chronicles the humorous adventures of a group of friends and focuses on exposing students to spoken Finnish. Authentic materials reflecting Finnish culture (e.g., songs, movies, TV news broadcasts, newspaper articles, etc.) will also be used.
Much of class time will focus on interactive communicative activities designed to activate the material learned in class, with students working in groups or pairs. Qualified students may register for this course under the 4003 designator for 2 credits (and reduced tuition).
Style: 20% Lecture, 80% Small Group Activities. Interactive exercises
Grading: 10% final exam, 18% reports/papers, 28% quizzes, 5% in-class presentation, 29% class participation, 10% other evaluation. Oral interviews
Exam Format: short answer, essay

FW 4004 Research in Fisheries
1-5 credit(s), max credits 15, 3 completions allowed; prerequisite instructor consent;
Instructor: STAFF
Description: Individual field, library, and laboratory research in fisheries. Primarily for majors. Students work on special projects. Individual field, library, and lab research in fisheries biology.
Style: Special projects and individual directed study
Grading: 100% reports/papers. 100% written reports/papers; may have occasional exceptions

FW 4007 Independent Study: Fisheries
1-5 credit(s), max credits 5, 1 completion allowed; prerequisite instructor consent;
Instructor: STAFF
Description: Individual field, library, and laboratory research in fisheries. Primarily for majors. Students work on special projects.
Style: Special projects and individual directed study; visitation to field sites if appropriate
Grading: 100% reports/papers.

FW 4009 Independent Study: Wildlife
1-5 credit(s), max credits 5, 1 completion allowed; prerequisite instructor consent;
Instructor: STAFF
Description: Individual field, library, and laboratory research in wildlife. Primarily for majors. Students work on special projects.
Style: Special projects and individual directed study; visitation to field sites if appropriate
Grading: 100% reports/papers.

FW 4136 or Concurrent registration is required (or allowed) in FW 4136 recommended;
Instructor: Sorensen, Peter William
Description: Fish are the most diverse and largest group of vertebrates on our planet. This course explores the biological basis of their success (their physiology and behavior), touching upon aspects of special importance to their conservation and management. It is a natural followup to Fish Biology (FW3136). Topics include fish movement and migration, feeding, schooling, sensory systems, communication, growth and bioenergetics, reproduction and pheromones, and ecotoxicology. The course relies entirely upon electronic reserve material for readings and students are offered the opportunity to write a short paper and to participate with graduate students in a 1 credit discussion group (FW5292). The course is taught concurrently with FW5401.
Style: 70% Lecture, 20% Discussion, 10% Guest Speakers.
Grading: 30% mid exam, 30% final exam, 25% reports/papers, 15% in-class presentation.

FW 5401 Fish Physiology and Behavior
2 credit(s); prerequisite [BIOL 1012, CHEM 1021] or instructor consent;
FW 4136 or Concurrent registration is required (or allowed)
Instructor: Sorensen, Peter William
Description: Fish are the most diverse and largest group of vertebrates on our planet. This course explores the biological basis of their success (their physiology and behavior), touching upon aspects of special importance to their conservation and management. It is a natural followup to undergraduate ichthyology courses. Topics include fish movement and migration, feeding, schooling, sensory systems, communication, growth and bioenergetics, reproduction and pheromones, and ecotoxicology. The course relies entirely upon electronic reserve material for readings and students are required to write a mock research proposal and participate in a 1 credit discussion group (FW5292). The course is taught concurrently with FW4401.
Style: 70% Lecture, 20% Discussion, 10% Guest Speakers.
Grading: 30% mid exam, 30% final exam, 30% reports/papers, 10% class participation.
Exam Format: short answer/essay

FW 5603W Habitats and Regulation of Wildlife
A-F only, 3 credit(s); prerequisite Biol 3407; Meets CLE req of Writing Intensive;
Instructor: Forster, James Derwin
Description: Student may contact the instructor or department for information.

FW 8204 Research in Fisheries
1-4 credit(s), max credits 4, 1 completion allowed;
Instructor: Lang, Jeffrey W.
Description: Student may contact the instructor or department for information.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor(s)</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>FW 8394</td>
<td>Research in Fisheries</td>
<td>Hornbach,Daniel J</td>
<td>1-4</td>
<td>A-F only, 3</td>
</tr>
<tr>
<td>FW 8394</td>
<td>Research in Fisheries</td>
<td>Sorensen,Peter William</td>
<td>1-4</td>
<td>A-F only, 3</td>
</tr>
<tr>
<td>FW 8394</td>
<td>Research in Fisheries</td>
<td>Pastor,John Joseph</td>
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<td>1-4</td>
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<td>Swanson,Barbara</td>
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<td>Swanson,Barbara</td>
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This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
Instructor: Cohen, Yosef  
**Description:** Student may contact the instructor or department for information.

FW 8494 Research in Wildlife  
1-4 credits(s), max credits 4, 1 completion allowed; prerequisite; instructor consent;  
**Instructor:** Fulton, David C  
**Description:** Student may contact the instructor or department for information.

FW 8494 Research in Wildlife  
1-4 credits(s), max credits 4, 1 completion allowed; prerequisite; instructor consent;  
**Instructor:** Gutierrez, Ralph J  
**Description:** Student may contact the instructor or department for information.

FW 8494 Research in Wildlife  
1-4 credits(s), max credits 4, 1 completion allowed; prerequisite; instructor consent;  
**Instructor:** Blair, Robert B  
**Description:** Student may contact the instructor or department for information.

FW 8494 Research in Wildlife  
1-4 credits(s), max credits 4, 1 completion allowed; prerequisite; instructor consent;  
**Instructor:** Johnson, Douglas H  
**Description:** Student may contact the instructor or department for information.

Food Science and Nutrition  
225 Food Science & Nutrition

FSCN 1013 Dietary Supplements: scientific, regulatory, and cultural aspects  
3 credits(s); Meets CLE req of Civic Life and Ethics;  
**Instructor:** Brady, Linda J  
**Description:** The course will cover: 1) Use of dietary supplements in the U.S.; how U.S. public demand drives industry and government. 2) The development and implementation of the law--Dietary Supplements Health and Education Act. 3) DSHEA and "safety testing," and risk assessment: How much safety data is needed before marketing? 4) Ethics of marketing. 5) FTC responsibilities and the ethics of advertising. 6) Other cultures as sources of supplements; transfusion of use between cultures. 7) Issues and ethics of intellectual property rights of indigenous cultures. 8) Rational use of dietary supplements for health and sports performance; ethical decisions in use for athletic performance. 9) Use of supplements for weight loss. A UM Connect audio video orientation is provided to explain the syllabus and assignment submission and academic integrity; registered students will receive information on orientation about a week before classes start. For each weekly unit, an online UM Connect presentation of the week's power point is also available to complement weekly readings. Students critically evaluate information on supplements and submit weekly homework and critical thinking questions online via the class website; these are graded online and returned. This course functions best for students who can manage their time effectively and are comfortable with a mix of factual questions and "thought" questions (critical thinking) that are more open ended and require students to move beyond the readings into higher level thinking. There is no textbook; readings are online.  
**Style:** 100% Web Based: totally web based  
**Grading:** 50% written homework, 50% reflection paper, homework and critical thinking (reflection) questions  
**Exam Format:** Homework and critical thinking are in multiple parts, with short answers of a paragraph or two for each part

FSCN 1102 Food: Safety, Risks, and Technology  
OPT No Aud, 3 credits(s); Meets CLE req of Civic Life and Ethics;  
**Instructor:** Diez-Gonzalez, Francisco  
**Description:** Introduction to the inherent risks and safety of the food supply and the use of public policy, and food technology to reduce those risks. The course will survey microbiological, chemical and environmental hazards, government and industry controls used to insure food safety including the new U.S. Food Safety Initiative, and public perception of those risks. The course will emphasize government regulations with respect to adulteration, food safety and misbranding. It will overview the biological, microbiological, physical and chemical deterioration of foods and will describe some of the technologies to control food spoilage. Thermal processing and irradiation as examples of the technologies used in food processing to reduce risk and ensure a safe food supply. This course will focus on current food safety issues and the magnitude of the overall food safety situation. The student will learn about timely issues such as genetically modified foods, food allergies, prion diseases and approaches to biosecurity. This course satisfies the CLE Citizenship and Public Ethics theme and emphasizes public policy making, critical thinking skills and internet use. The course URL is https://vista.umn.edu/webct.  
**Style:** 60% Lecture, 20% Discussion.  
**Grading:** 38% reports/papers, 12% class participation, 50% other evaluation. exams  
**Exam Format:** Short answers and essays

FSCN 1112 Principles of Nutrition  
3 credits(s); prerequisite High school [biology, chemistry];  
**Instructor:** Brady, Linda J  
**Description:** This course is for all levels of students and will address: 1. essential nutrients needed from the diet; 2. major functions of nutrients and physiological changes with deficiency or excess; 3. digestion, absorption, and metabolism of nutrients; 4. eating programs; 5. scientific method and nutrition; 6. life cycle issues; 7. food safety issues. This class is web enhanced. Much of material covered in class is available in the text and power points posted on the class website and UM Connect presentations of the power points, but additional information, examples, and current events will be given in class. Students will be evaluated by weekly online chapter quizzes, a diet analysis and questions about their diet analysis, and a final comprehensive exam covering the major themes of the course. Prerequisite is high school biology, but college biology and chemistry are helpful, since nutrition is a science that is based on biology, physiology, and biochemistry, as well as more social aspects.  
**Style:** 90% Lecture, 10% Small Group Activities. small group discussion  
**Grading:** 25% final exam, 50% quizzes, 25% other evaluation.  
Diet analysis and associated questions  
**Exam Format:** multiple choice

FSCN 1112 Principles of Nutrition  
3 credits(s); prerequisite High school [biology, chemistry];  
**Instructor:** Arikawa, Andrea Yukie  
**Description:** This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policy, fee, and financial aid restrictions. When you are studying nutrition, you soon realize that there is always something new to learn. Scientists are constantly making new discoveries, and there are new advances in the field every day. What was true about nutrition ten years ago is not the case today. Keep in mind that oftentimes there is no single correct answer to a question about nutrition. This uncertainty allows you to decide the best course of action for a particular situation. Hopefully as you complete this course you will become confident in your ability to critically evaluate the plethora of nutrition information and make informed dietary choices for yourself, your family, and those you may be working with professionally.  
**Style:** Online with handwritten exams  
**Grading:** 43% mid exam, 36% final exam, 14% special projects, 7% quizzes.  
**Exam Format:** Supervised, in-person (not online) exams

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at [http://onestop.umn.edu](http://onestop.umn.edu). IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
FSCN 1112 Principles of Nutrition
3 credit(s); prereq High school [biology, chemistry]
Instructor: Mashek, Douglas
Description: Student may contact the instructor or department for information.

FSCN 1905 Topics: Freshman Seminar
A-F only, 1-3 credit(s), max credits 3, 1 completion allowed; prereq Fr;
Instructor: Csallany, A. Saari
Description: Student may contact the instructor or department for information.

FSCN 2021 Introductory Microbiology
A-F only, 4 credit(s); prereq BIOL 1009, CHEM 1015;
Instructor: O'Sullivan, Daniel J
Description: This course is intended primarily for undergraduates who require a basic knowledge of microbiology and how it impacts their everyday life. It will serve as a broad introduction to the diverse world of bacteria, fungi, and viruses; their role as agents of human diseases (from flesh eating bacteria to AIDS) and how humans fight back; their roles in food spoilage, food borne diseases and how to control them; their beneficial roles in food preservation, health promotion (probiotics), preventing plant diseases, food/drug production (biotechnology), cleaning up oil spills (bioremediation). The course will also introduce the student to the basics of genetic engineering and its present and future potential roles in food, agriculture and medicine.
Style: 60% Lecture, 40% Laboratory.
Grading: 35% mid exam, 30% final exam, 10% quizzes, 25% laboratory evaluation.
Exam Format: multiple choice and short answer

FSCN 3102 Introduction to Food Science
3 credit(s); prereq Chem 1022;
Instructor: Vickers, Zata M
Description: Course Description: This course examines why foods change when you heat them, freeze them, mix them together, bake them, etc. Students work in small groups to prepare several different versions of common foods and explain the chemistry responsible for the differences they observe among them. Intended for students majoring in Nutrition or Food Science and others interested in the science of food preparation. Student learner outcomes: Explain the functions of major food ingredients and preparation steps in a variety of food systems. Describe changes in food resulting from different preparation methods and explain these changes based on knowledge of the physical and chemical changes. By the end of the course students will be able to change recipes to accommodate a variety of dietary restrictions. Laboratory notebooks, quizzes, exams and the final exam provide the assessment for these outcomes. Evaluate the quality of food products using sensory descriptions and objective methods of analysis. Laboratory notebooks provide the assessment for this. Produce and explain the chemical or physical basis for differences in food quality resulting from variations in preparation and/or ingredients. Laboratory notebooks, quizzes and exams provide the assessment for this.
Style: 40% Lecture, 10% Discussion, 50% Laboratory.
Grading: 40% mid exam, 20% final exam, 12% quizzes, 10% class participation, 10% laboratory evaluation.
Exam Format: Writing explanations, definitions, descriptions

FSCN 3612 Life Cycle Nutrition
3 credit(s); prereq 1112, Chem 1022;
Instructor: Slavin, Joanne Louise
Description: Course covers nutritional changes through the life cycle. Emphasis is on pregnancy, lactation, children, teens and the elderly. Students complete a Nutrition Makeover as an assignment. Exams are objective. Course is designed for undergraduates in nutrition but open to all with an interest in nutrition for specific times in the lifespan.
Style: 75% Lecture, 25% Discussion.
Grading: 80% mid exam, 20% reflection paper. nutrition makeover, nutrition research paper
Exam Format: Multiple choice, matching

FSCN 3614 Nutrition Education and Counseling
3 credit(s); prereq 1112;
Instructor: Peterson, Sabrina
Description: Student may contact the instructor or department for information.

FSCN 3731 Food Service Operations Management Laboratory
A-F only, 2 credit(s); prereq [3102 or concurrent enrollment 3102], [3732 or concurrent enrollment 3732];
Instructor: Lendway, William John
Description: Student may contact the instructor or department for information.

FSCN 3732 Food Service Operations Management
A-F only, 3 credit(s); prereq 3102 or concurrent enrollment in 3102;
Instructor: Lendway, William John
Description: Student may contact the instructor or department for information.

FSCN 4096 Professional Experience Program: Internship
A-F only, 1-4 credit(s), max credits 24, 6 completions allowed; prereq FScN undergrads, instr consent; UC only;
Instructor: Carlad-Barrett, Anna
Description: Student may contact the instructor or department for information.

FSCN 4112 Food Chemistry and Functional Foods
3 credit(s); prereq 3102, BIO 3021;
Instructor: Bunzel, Mirko
Description: Student may contact the instructor or department for information.

FSCN 4122 Food Fermentations and Biotechnology
2 credit(s); prereq [MICB 3301, BIO 4003] or instr consent;
Instructor: O'Sullivan, Daniel J
Description: This course covers the major food fermentations important for today’s food industry, with a particular focus on the microbiological components. These food fermentations cover all the major commodity food groups of dairy, cereal, meat, vegetables and fruits. The different microbial cultures used in foods, including probiotic cultures, will be analyzed focusing on the current and future trend in the culture industry. The student will also be introduced to the impact of biotechnology on food production, from classical to modern day food biotechnology, and beyond. Modern day genetic tools, as applied to plants, animals and microbes, will be examined. A major focus will be on the improvement of microbes used in food production by modern biotechnological approaches.
Style: 80% Lecture, 17% Laboratory, 3% Small Group Activities.
Grading: 40% mid exam, 40% final exam, 15% quizzes, 5% laboratory evaluation.

FSCN 4131 Food Quality
3 credit(s); prereq 1102, Jr;
Instructor: Schoenfuss PhD, Tanya C
Description: Management systems in processing and distribution of foods that ensure food quality, safety and compliance with food laws & regulations. Quality management, HACCP, regulations, audits, plant/equipment design for sanitation, specifications, recalls and control systems.

FSCN 4291 Independent Study
1-4 credit(s), max credits 4, 1 completion allowed; prereq Undergrads, instr consent;
Instructor: STAFF
Description: Independent Study is for one-to-one faculty student work agreed upon food science related topics. Prior registration approval is necessary and can be obtained by contacting Sue P. at 624-6753. Contracts are used to outline the proposed projects.

FSCN 4312W Food Analysis
FSCN 4345 Flavor Technology
3 credit(s); prereq 4121, 4321, 4331;
Instructor: Peterson, Devin Grant
Description: Student may contact the instructor or department for information.

FSCN 4349 Food Science Capstone
A-F only, 2 credit(s); prereq Food science major, sr;
Instructor: Peterson, Devin Grant
Description: Student may contact the instructor or department for information.

FSCN 4612 Advanced Human Nutrition
4 credit(s); prereq 1112, CHEM 1022, [PHSL 3051 or ANSCI 3301];
Instructor: Slavin, Joanne Louise
Description: This course covers how we learn about normal human nutrition. We discuss nutrient requirements and how these are determined. Emphasis is on the physiological basis for nutrition. Digestion and absorption of food are emphasized. Sports nutrition and energy balance are also covered extensively. Students will review a nutrition topic and write a research proposal. We also cover dietary recommendations and nutrition policy. The class is designed for undergraduates in nutrition who have completed an introductory nutrition class.
Style: 75% Lecture, 25% Discussion.
Grading: 50% mid exam, 20% final exam, 20% reports/papers, 10% class participation.
Exam Format: multiple choice, true/false

FSCN 4621W Nutrition and Metabolism
4 credit(s); prereq 4612, BioC 3021, Phsl 3051; Meets CLE req of Writing Intensive;
Instructor: Chen, Xiaoli
Description: This course is designed to provide students with an understanding of carbohydrate, lipid and protein metabolism. Emphases are on main metabolic pathways of three macronutrients and their interrelationship. Main concepts to be introduced include anabolic, catabolic, and amphibolic metabolism and regulation of carbohydrate, lipid and protein. These concepts will assure an understanding of how macronutrient metabolism is regulated to fulfill energy needs for maintaining the body’s metabolic and physiological functions. A variety of activities such as small and large group discussions, quizzes, written reports or papers, etc. will be used to prepare students to evaluate scientific discoveries and developments that affect their lives, and formulate opinions about related issues.
Style: 90% Lecture, 10% Discussion.
Grading: 24% mid exam, 20% final exam, 20% reports/papers, 14% quizzes, 16% other evaluation. homework
Exam Format: multiple choice and short answer

FSCN 4664 Senior Capstone: Becoming a Registered Dietitian
S-N only, 1 credit(s); prereq [(4665 or Concurrent registration is required (or allowed) in 4665), Nutrition/dietetics subplan of nutrition major] or instr consent ;
Instructor: Marion, Corrie Lynn
Description: Student may contact the instructor or department for information.

FSCN 4665 Medical Nutrition Therapy I
A-F only, 2 credit(s); prereq 4612, Phsl 3051, BioC 3021;
Instructor: Earthman, Carrie
Description: Nutritional assessment and support; fluid and electrolyte balance; medication/diet interactions. Nutritional intervention in hypermetabolic conditions, disorders of the gastrointestinal system, and in cancer and AIDS. Interventions for pediatric and adult patients/clients.
Style: 75% Lecture, 15% Discussion. Individual and Group Case Work

FSCN 5101 Food Regulation in the United States
A-F only, 2 credit(s); prereq [(Grad or sr) food science or nutrition major] or instr consent ;
Instructor: Cariad-Barrett, Anna
Description: Student may contact the instructor or department for information.

FSCN 5461 Food Packaging
2 credit(s); prereq 1102, 3102, Phys 1102 or Phys 1302;
Instructor: Bernard, Stuart N
Description: Student may contact the instructor or department for information.

FSCN 8310 General Seminar
S-N only, 1 credit(s), max credits 2; prereq instr consent;
Instructor: Vickers, Zata M
Description: Student may contact the instructor or department for information.

FSCN 8330 Research Topics
1 credit(s), max credits 6, 6 completions allowed;
Instructor: Cariad-Barrett, Anna
Description: Student may contact the instructor or department for information.

FSCN 8334 Reaction Kinetics of Food Deterioration
2 credit(s); prereq Chem 3501;
Instructor: Labuza PhD, Ted Peter
Description: Student may contact the instructor or department for information.

FSCN 8336 Lipid Chemistry and Rancidity of Foods
2 credit(s); prereq 4112;
Instructor: Csallany, A Saari
Description: Student may contact the instructor or department for information.

FSCN 8391 Independent Study: Food Science
1-4 credit(s), max credits 6, 6 completions allowed; prereq instr consent ;
Instructor: Cariad-Barrett, Anna
Description: Student may contact the instructor or department for information.

Forest Resources
115 Green Hall

FR 1001 Orientation and Information Systems
A-F only, 1 credit(s);
Instructor: Burk, Thomas Edward
Description: This course provides orientation and planning for students entering the Forest Resources (FR) and Recreation Resources Management (RRM) majors. During this semester
students will be introduced to key issues in their fields of study. Description of careers, career planning (choice of major tracks, internships, summer experience, mentoring), academic advising and engagement with alumni contacts are major components of the course. Introduction to professional skill building includes information technology tools in the workplace and access to library and research tools. At the end of this course students should know the kind of course work needed for their degree choice as well as the timing of when to take courses to successfully complete their undergraduate degree program. Students should know what the student learning centers (SLC) and SMART commons are and how to use them. In addition students should be able to: a) write a cover letter and develop a resume targeting a specific job of interest to them, b) know how to conduct a job search and prepare for a job interview, c) find an internship of interest using resources at the St. Paul Campus Career Center, d) find and apply for study abroad opportunities, e) understand how to use the campus libraries to access information, f) have an appreciation for and obtain some exposure to the importance of geospatial data to their field of study, g) manipulate data in an Excel spreadsheet, and h) assess their desire to continue their education beyond the baccalaureate level.

FR 1101 Dendrology: Identifying Forest Trees and Shrubs
3 credit(s);
Instructor: Hanson, Dave
Description: Student may contact the instructor or department for information.

FR 3104 Forest Ecology
A-F only, 4 credit(s);
prereq Biol 1001 or 1009; 1 semester college chemistry recommended Weekend field trip (required);
Credit will not be granted if credit has been received for: FR 5104;
Instructor: Montgomery, Rebecca Anne
Description: Ecology, the study of the interactions of organisms and their environment, forms the essential foundation of the management and conservation of the world's ecosystems. This course examines basic ecological principles through the lens of forest ecosystems, exploring the theory and practice of ecology at various levels of organization from individuals to populations, communities and ecosystems. At each level we examine past and current theoretical advances and use case studies to evaluate the impacts of increasing human domination of global systems on forested ecosystems. The course covers diverse topics including global climate change; individual and population growth; community assembly; invasive species; biodiversity; and alteration of water, carbon and nutrient cycles. During two class periods per week we explore forest ecology through a combination of lecture, group learning and problem solving, and discussion. Labs include group research projects and trips to local natural areas, urban forests, and the north shore of Lake Superior. Lab sessions are designed to complement and reinforce material covered in regular class periods.
Style: 40% Lecture, 30% Laboratory, 25% Small Group Activities, 5% Field Trips. Cooperative group learning activities. Laboratory involves field trips and data collection in forests around the metro area.
Grading: 30% mid exam, 20% final exam, 5% reports/papers, 15% special projects, 20% class participation. Class participation includes cooperative group work, quizzes, minute papers, in-class writing, quizzes. The special project is your lab project presentation (oral or poster format).
Exam Format: A mixture of definitions, multiple choice, matching, short and long essay

FR 3114 Hydrology and Watershed Management
3 credit(s);
prereq [BIOL 1001 or BIOL 1009], [CHEM 1015, CHEM 1017] or CHEM 1021, MATH 1151 or instr consent;
Credit will not be granted if credit has been received for: FR 5114;
Instructor: Brooks, Kenneth N
Description: Introduction to the hydrologic cycle and water resources with an emphasis on rural watersheds. Applications of hydrologic concepts to evaluate impacts of land use and management on water yield, storm flow, flooding, erosion, sedimentation, and stream channel - riparian processes. The role of hydrologic information in achieving integrated watershed management is emphasized throughout the course. State, national and international examples are presented.

FR 3131 Geographical Information Systems (GIS) for Natural Resources
A-F only, 4 credit(s);
prereq Soph or jr or sr;
Credit will not be granted if credit has been received for: FR 5131; Meets CLE req of Technology and Society;
Instructor: Jenks, Andrew Carl
Description: FR 3131 is an introduction to Geographical Information Systems, focusing on spatial data development and analysis in the science and management of natural resources. Topics covered include basic data structures, data sources, data collection, data quality, geodesy and map projections, spatial and tabular data analyses, digital elevation data and terrain analyses, cartographic modeling, and cartographic layout. Laboratory exercises provide practical experiences that complement the theory covered in lecture.
Style: 50% Lecture, 50% Laboratory.
Grading: 15% mid exam, 15% final exam, 55% laboratory evaluation, 15% other evaluation. Third Test
Exam Format: short answer, multiple choice

FR 3204 Landscape Ecology and Management
A-F only, 3 credit(s);
prereq Ecology course;
Credit will not be granted if credit has been received for: FR 5204;
Instructor: Reich, Peter Bernard
Description: This course is an introduction and survey of landscape ecology. The major theme of the class is the role of spatial configuration on ecological patterns and processes. We examine the landscape ecology in its application to research, analysis, conservation, and management. Topics include: sources of landscape pattern, introduction to landscape quantification, ecological scale, population dynamics, reserve design, and patch dynamics, and disturbance. Special topics are introduced on an annual basis.

FR 3204 Landscape Ecology and Management
A-F only, 3 credit(s);
prereq Ecology course;
Credit will not be granted if credit has been received for: FR 5204;
Instructor: Frelich, Lee E
Description: This course is an introduction and survey of landscape ecology. The major theme of the class is the role of spatial configuration on ecological patterns and processes. We examine the landscape ecology in its application to research, analysis, conservation, and management. Topics include: sources of landscape pattern, introduction to landscape quantification, ecological scale, population dynamics, reserve design, and patch dynamics, and disturbance. Special topics are introduced on an annual basis.

FR 3262 Remote Sensing of Natural Resources and Environment
3 credit(s);
Credit will not be granted if credit has been received for: FR 5262;
Instructor: Knight, Joe
Description: Student may contact the instructor or department for information.

FR 3262 Remote Sensing of Natural Resources and Environment
3 credit(s);
Credit will not be granted if credit has been received for: FR 5262;
Instructor: Knight, Joe
Description: Principles and techniques of remote sensing and its applications to mapping and monitoring land/water resources from local to global scales. Forest and natural resource inventory. Forest cover and soil mapping. Land use and global change analysis. Lab provides hands-on experience working with aerial photography and digital imagery using the Imagine image processing software package.
Style: 75% Lecture, 25% Laboratory.
Grading: 80% mid exam, 30% special projects, 10% quizzes.
FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Ek, Alan Ryan
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Vogt, Carl Eugene
Description: Student may contact the instructor or department for information.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Nelson, Kristen
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Holgerson, Howard M
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Burk, Thomas Edward
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Baughman, Mel J.
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Kilgore, Mike
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Blinn, Charles R
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Current, Dean Alan
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Schneider, Ingrid Eleanor
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Reich, Peter Bernard
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Johnson, Gary
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Freligh, Lee E
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Carlson, Stephan Paul
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Brooks, Kenneth N
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
Instructor: Bolstad, Paul V
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent;
FR 4293 Directed Study
1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent ;
Instructor: D’Amato, Anthony William
Description: Study/project on topic of personal interest in consultation with faculty member. Initial proposal, reports of accomplishments.

FR 5204 Landscape Ecology and Management
A-F only, 3 credit(s); prereq Grad student or instr consent ;
Instructor: Reich, Peter Bernard
Description: This course is an introduction and survey of landscape ecology. The major theme of the class is the role of spatial configuration on ecological patterns and processes. We examine the landscape ecology in its application to research, analysis, conservation, and management. Topics include: sources of landscape pattern, introduction to landscape quantification, ecological scale, population dynamics, reserve design, and patch dynamics, and disturbance. Special topics are introduced on an annual basis.

FR 5264 Advanced Forest Management Planning
3 credit(s); prereq 3471 or instr consent;
Instructor: Hoganson, Howard M
Description: Applied models for forest planning to integrate forest resource conditions and uses. Scales range from tactical stand-level management to strategic forest-wide and landscape-level planning and regional timber supply analysis. Understanding optimization models and heuristic techniques as tools for trade-off and sensitivity analyses of alternative management policies and goals. Integrating sustainable timber production with desirable future conditions and spatial structure or biodiversity objectives. Practical problems and case studies.
FR 8101 Research Problems: Physiological Ecology
1-5 credit(s), max credits 10, 10 completions allowed; prereq
instructor consent;
Instructor: Reich, Peter Bernard
Description: Independent research under faculty guidance.

FR 8101 Research Problems: Physiological Ecology
1-5 credit(s), max credits 10, 10 completions allowed; prereq
instructor consent;
Instructor: Montgomery, Rebecca Anne
Description: Student may contact the instructor or department
for information.

FR 8102 Research Problems: Forest-Tree Genetics
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: David, Andrew J
Description: Student may contact the instructor or department
for information.

FR 8103 Research Problems: Forest Hydrology
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Eckman, Karlyn
Description: Student may contact the instructor or department
for information.

FR 8103 Research Problems: Forest Hydrology
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Brooks, Kenneth N
Description: Student may contact the instructor or department
for information.

FR 8104 Research Problems: Forest Ecology
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Reich, Peter Bernard
Description: Student may contact the instructor or department
for information.

FR 8104 Research Problems: Forest Ecology
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Frelich, Lee E
Description: Student may contact the instructor or department
for information.

FR 8104 Research Problems: Forest Ecology
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Montgomery, Rebecca Anne
Description: Student may contact the instructor or department
for information.

FR 8105 Research Problems: Silviculture
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: D'Amato, Anthony William
Description: Student may contact the instructor or department
for information.

FR 8106 Research Problems: Urban Forestry--Biology and Management
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Johnson, Gary
Description: Student may contact the instructor or department
for information.

FR 8107 Seminar: Forest Resources
1 credit(s);
Instructor: Thompson, Jerrilyn L
Description: Student may contact the instructor or department
for information.

FR 8201 Research Problems: Forest Economics
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Hoganson, Howard M
Description: Student may contact the instructor or department
for information.

FR 8201 Research Problems: Forest Economics
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Kilgore, Mike
Description: Student may contact the instructor or department
for information.

FR 8201 Research Problems: Forest Economics
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Becker, Dennis R
Description: Student may contact the instructor or department
for information.

FR 8202 Research Problems: Forest Biometry and Measurements
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Ek, Alan Ryan
Description: Student may contact the instructor or department
for information.

FR 8202 Research Problems: Forest Biometry and Measurements
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Schneider, Ingrid Eleanore
Description: Student may contact the instructor or department
for information.

FR 8202 Research Problems: Forest Biometry and Measurements
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Davenport, Mae Allen
Description: Student may contact the instructor or department
for information.

FR 8203 Research Problems: Forest Policy
1-5 credit(s), max credits 10, 4 completions allowed;
Instructor: Nelson, Kristen
Description: Student may contact the instructor or department
for information.

FR 8204 Research Problems: Forest Policy
1-5 credit(s), max credits 10, 4 completions allowed;
Instructor: Baughman, Mel J.
Description: Student may contact the instructor or department
for information.

FR 8204 Research Problems: Forest Policy
1-5 credit(s), max credits 10, 4 completions allowed;
Instructor: Kilgore, Mike
Description: Student may contact the instructor or department
for information.

FR 8204 Research Problems: Forest Policy
1-5 credit(s), max credits 10, 4 completions allowed;
Instructor: Current, Dean Alan
Description: Student may contact the instructor or department
for information.

FR 8204 Research Problems: Forest Policy
1-5 credit(s), max credits 10, 4 completions allowed;
Instructor: Becker, Dennis R
Description: Student may contact the instructor or department
for information.
FR 8206 Research Problems: Spatial Data Analysis
1-5 credit(s), max credits 10, 10 completions allowed; prereq instr consent;
Instructor: Bolstad, Paul V
Description: Student may contact the instructor or department for information.

FR 8205 Research Problems: Spatial Data Analysis
1-5 credit(s), max credits 10, 10 completions allowed; prereq instr consent;
Instructor: Knight, Joe
Description: Student may contact the instructor or department for information.

FR 8206 Research Problems: Forest Management
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Ek, Alan Ryan
Description: Student may contact the instructor or department for information.

FR 8206 Research Problems: Forest Management
1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Blanchette, Robert A
Description: Student may contact the instructor or department for information.

FR 8207 Economic Analysis of Natural Resource Projects
A-F only, 2 credit(s); prereq instr consent;
Instructor: Kligore, Mike
Description: Student may contact the instructor or department for information.

FR 8208 Research Problems: Environmental Learning and Leadership
1-5 credit(s), max credits 5, 1 completion allowed; prereq instr consent;
Instructor: Nelson, Kristen
Description: Student may contact the instructor or department for information.

FR 8208 Research Problems: Environmental Learning and Leadership
1-5 credit(s), max credits 5, 1 completion allowed; prereq instr consent;
Instructor: Baughman, Mel J.
Description: Student may contact the instructor or department for information.

FR 8208 Research Problems: Environmental Learning and Leadership
1-5 credit(s), max credits 5, 1 completion allowed; prereq instr consent;
Instructor: Carlson, Stephan Paul
Description: Student may contact the instructor or department for information.

FREN 1001 Beginning French
5 credit(s);
Instructor: STAFF
Description: This course is intended for students with NO previous study of French, or students who have not studied French in recent years (gap of 3 years or more). If you have more than two years of high school French completed within the last year or two, you should register for Fren 1022 which provides students with an accelerated review of Fren 1001 material followed by material covered in Fren 1002. For further information on placement, see your advisor or contact the Department of French and Italian. Fren 1001 is a theme-based course. Students develop their communication skills in French in different areas: speaking, writing, listening and reading. In addition to linguistic skills, students develop a better understanding of diverse areas of French-speaking cultures. Themes addressed in the course include: student life, family, recreation, life in Francophone cities, housing, Francophone heritage in Northern America and Canada. The text, "Deux Mondes," 6th ed., is accompanied by an electronic workbook (Quia) with a variety of practice activities including listening ones, designed to be used by students outside of class. In the "Deux Mondes" textbook students will work with materials from "Premiere Etape" through Ch. 5. Since the majority of class is devoted to communication activities, class attendance is fundamental. Expect an average of 1.5 hours of outside preparation for each class session hour.
Style: Combination of whole-class and small-group activities
Grading: 10% mid exam, 15% final exam, 12% reports/papers, 8% special projects, 12% other evaluation, written exams; 12% oral tests; 8% workbook exercises
Exam Format: All exams evaluate listening, vocabulary, grammar, writing, reading and culture.

FREN 1002 Beginning French
5 credit(s);
Instructor: Estrem, Mary Elaine
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. In this course, you will go to the center of the French-speaking world--Paris--where you will learn French by participating in a story about a young French woman, Mireille Bellevau, and a young American man, Robert Taylor, who develop an interest in each other. As their story unfolds, you will learn language for common social situations, such as ordering food and drink; making purchases; talking about one's interests and one's dreams; talking about one's studies; extending, accepting, and refusing invitations; and behaving politely at the dinner table. You will learn to use past tenses, and you will see some of the famous sites in Paris. The language you learn in French 1001 will allow you to function in some social situations and begin your understanding of French grammar.
Style: This is a printed correspondence section.
Grading: 25% mid exam, 50% final exam, 25% written homework. The self-recordings are not graded unless part of a quiz. The oral exercises are for practice and to check your pronunciation. The instructor may record corrections to your pronunciation. Lowest written and oral quiz scores are dropped.
Exam Format: Supervised, in-person exams.

FREN 1002 Beginning French
5 credit(s); prereq 1001 or equiv; Credit will not be granted if credit has been received for: FREN 4022;
Instructor: STAFF
Description: Fren 1002 is intended for students who have completed Fren 1001 or the equivalent. In this course students build on the interpersonal, interpretative and presentational skills developed in first-semester French and on their knowledge and understanding of Francophone practices and products. Culture is taught through multimedia and cultural readings. Fren 1002 is a theme-based course. Themes addressed in this course include: Francophone youth, food, geography, the environment, travel, education and employment. The text, "Deux Mondes," 6th ed., is...
accompanied by an electronic workbook (Quia/Centro) with a variety of practice activities including listening ones, designed to be used by students outside of class. In the "Deux Mondes" textbook students will work with materials from Ch. 6 through Ch. 10. Since the majority of class is devoted to communication activities, class attendance is fundamental. Expect an average of 1.5 hours of outside preparation for each class session hour.

**Style:** Class Time: Mostly discussion and student involvement in pair/group activities.

**Grading:** 30% written exams, 15% oral exams, 13% final exam, 12% reports/papers, 13% special projects, 12% quizzes, 5% workbook exercises

**Exam Format:** All exams evaluate listening, vocabulary, grammar, writing, reading and culture. Oral skills are assessed in pair discussions.

**FREN 1002 Beginning French**

5 credit(s); prereq 1001 or equiv; Credit will not be granted if credit has been received for: FREN 4022;
**Instructor:** Estrem, Mary Elaine

**Description:** This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. In this course, you will go to the center of the French-speaking world - Paris - where you will learn French by participating in a story about a young French woman, Mireille Belleau, and a young American man, Robert Taylor, who develop an interest in each other. As their story unfolds, you will learn language for common social situations, such as ordering food and drink; making purchases; talking about one's interests and one's dreams; talking about one's studies; extending, accepting, and refusing invitations; and behaving politely at the dinner table. You will learn to use past tenses, and you will see some more of the famous sites in Paris. The language you learn in French 1002 will allow you to function in a greater range of social situations and extend your understanding of French grammar.

**Style:** This is a printed correspondence section.

**Grading:** 25% mid exam, 50% final exam, 25% written homework. The self-recordings will not be graded. The oral exercises are for practice and for your instructor to check your pronunciation. The instructor may record corrections to your pronunciation. Lowest written and oral quiz scores will be dropped.

**Exam Format:** Supervised, in-person (not online) exams

**FREN 1003 Intermediate French**

5 credit(s); prereq 1002 or Entrance Proficiency Test; **Instructor:** STAFF

**Description:** Prereq: 1002 or 1022 or Entrance Proficiency Test

**Description:** This course is designed for students who have completed Fren 1002 or 1022 with a C- or better or who have successfully passed the EPT (Entrance Proficiency Test) for this level. In this course students build on the interpersonal, interpretive and presentational skills developed in beginning French and on their knowledge and understanding of Francophone practices and products. Culture is taught through multimedia and cultural readings. Fren 1003 is a theme-based course. Themes addressed in this course include: French media and cinema, the French resistance, wellness and health, current French family, societal and global issues. The text, "Deux Mondes," 6th ed., is accompanied by an electronic workbook (Quia/Centro) with a variety of practice activities including listening ones, designed to be used by students outside of class. In the "Deux Mondes" textbook students will work with materials from Ch. 11 through Ch. 14. They will also work with the film 'Le Chagrin du Regre' available on the work of a young French journalist and her pursuit of the truth about her grandfather's past. Since the majority of class is devoted to communication activities, class attendance is fundamental. Expect an average of 1.5 hours of outside preparation for each class session hour.

**Style:** Mostly discussion and student involvement in pair/group activities.

**Grading:** Grade: 15%: final exam, 20%: reports/papers, 6%: chapter quizzes, 7%: class participation, 32%: other evaluation: written exams (22.5%), writing assignments on movie, on-line writing assignments (9.5%), 15%: oral exams, 5%: workbook exercises.

**Exam Format:** Exam Format: Exams assess a student's listening, reading, speaking and writing proficiency and cultural knowledge and understanding. Oral exams are administered in pairs, written exams involve answering short questions and essay writing.

**FREN 1004 Intermediate French**

5 credit(s); prereq 1003 or Entrance Proficiency Test; **Instructor:** STAFF

**Description:** This course is for those who have successfully passed Fren 1003 with a C- or better or have passed all sections of the EPT (Entrance Proficiency Test) for this level. This course continues the building of speaking, writing, listening and reading skills acquired during the first three semesters of French while expanding cultural awareness, knowledge and understanding of Francophone cultures. Emphasis is placed on reading, writing and culture. The theme of this course is that of cultural identity, addressed via discussion of food, family, education, work, nationality and diversity. A custom edition of "Ouvrures" (based on the 4th ed.) includes contemporary and literary texts. In this text students will learn material from Chapters 1 through 8, with emphasis on chapters 1, 2, 3, 6 and 7. A supplemental course pack includes activities to accompany video clips, as well as supplemental grammar activities. Writing skills will be developed through process-writing essays. Several class sessions will allow students to work with audio-visual resources (mainly film clips) to develop their listening skills; the clips will also serve as a basis for cultural discussions. Email exchanges with native French speakers learning English will further enhance cultural knowledge. During enrollment in 1004 students who choose to, will have the opportunity to complete the Language Proficiency Exam (LPE) and earn a text line on their transcript endorsing their proficiency in French.

**Style:** Mostly discussion and student involvement in pair/group activities.

**Grading:** 15% final exam, 20% reports/papers, 5% quizzes. 10% email exchanges and other assignments; 30% written exams; 15% oral exams; 5% workbook exercises.

**Exam Format:** Exams assess a student's listening, reading, speaking and writing proficiency. Oral exams are administered in pairs, written exams involve answering short questions and essay writing.

**FREN 1022 Accelerated Beginning French**

5 credit(s); prereq 2 or more yrs high school French; Credit will not be granted if credit has been received for: FREN 4002;
**Instructor:** STAFF

**Description:** Prereq: 2 or more yrs high school French

**Description:** This beginning French course for false beginners is intended for students who have previously studied French in high school or at a community college, or who are transfer students, while Fren 1001 is a course for students with no previous French studies. The Fren 1022 course begins with a review of Fren 1001 materials (Ch. preliminaire through Ch. 5 in "Deux Mondes" 6th ed.), followed by materials introduced in Fren 1002 (Ch. 6 through Ch. 10). In other words, the course allows students to learn first-year materials in one semester. Upon entering Fren 1022 students should be familiar with basic vocabulary related to daily life and daily survival situations, present and past tenses (please note: "passe compose" will be reviewed and "imparfait" will be introduced). Fren 1022 is a theme-based course. Themes addressed in this course include: student life, family, recreation, housing, Francophone heritage in North America, Francophone youth, food, geography, the environment, travel, education and employment. Students develop knowledge and understanding of Francophone practices and products through multimedia and cultural readings. The text, "Deux Mondes," 6th ed., is accompanied by an electronic workbook (Quia/Centro) with a variety of practice activities including listening ones, designed to be used by students outside of class. Since the majority of class is devoted to communication class attendance is fundamental.
FREN 3014 French Phonetics
2 credit(s); prereq 1004;
Instructor: Treece PhD,Rick
Description: This course will focus on both the theoretical and practical aspects of French pronunciation, with a strong emphasis on improving pronunciation. In the theoretical portion of the course, the major aspects of French pronunciation will be examined, with particular attention given to areas of contrast between French and English pronunciation. Students will learn to use symbols from the International Phonetic Alphabet in order to do phonetic transcription, i.e. representing French sounds with phonetic symbols. Another important theoretical component is learning the rules governing the correspondence between written letters and their pronunciation. In the practical portion of the course, students will be given extensive pronunciation practice so that they may identify and eliminate errors in their own pronunciation. NOTE: This is NOT a course in French conversation. This course is designed for non-native speakers of French and is a required course for students completing a French major under semesters. However, students with excellent pronunciation skills may gain exemption from this requirement by passing a practical pronunciation test.
Style: 10% Lecture, 10% Discussion, 80% Laboratory.
Grading: 10% final exam, 5% reports/papers, 20% quizzes, 10% class participation, 10% laboratory evaluation, 45% other evaluation. 8 audio recordings
Exam Format: short answer, multiple choice

FREN 3015 Advanced French Grammar and Communication
3 credit(s); prereq 1004 or equiv or instr consent ;
Instructor: STAFF
Description: Fren 3015 is the first in a two-course sequence (with 3016) which combines an intensive review of grammar with a special focus on the articulation and organization of ideas through reading, writing, and textual analysis. In 3015, students will develop skills in a variety of writing forms (e.g. portrait, description, narration) while exploring selected cultural themes through written texts and film. Course requirements include exams as well as regular writing assignments, which usually involve one rewriting. In order to enroll in 3015, it is highly recommended that students have completed Fren 1004 with a minimum grade of B; transfer students should take the Language Proficiency Exam and receive a High Pass. For information on the LPE, see <a href="http://langtest.umn.edu/imdatesGPT.html">http://langtest.umn.edu/imdatesGPT.html</a>
Style: Language instruction
Exam Format: Grammar exercises, essays

FREN 3016 Advanced French Composition and Communication
3 credit(s); prereq 3015 or equiv or instr consent ;
Instructor: STAFF
Description: Fren 3016 is the second in a two-course sequence (with 3015) which combines an intensive review of grammar with a special focus on the articulation and organization of ideas through reading, writing, and textual analysis. In 3016, students will develop skills in a variety of writing forms (e.g. compite rendu, argumentative essay, film scene analysis) while exploring selected cultural themes through written texts and film. Course requirements include written exams as well as regular writing assignments, which usually involve one rewriting. Students who do not receive a grade of B or better in 3015 (or equivalent course) are strongly encouraged to repeat 3015 before taking 3016.
Style: Language instruction
Grading: 50% written homework, 10% class participation.
Exam Format: Grammar exercises, essay

FREN 3018 French Oral Communication
3 credit(s); prereq 3014, 3015;
Instructor: Mougel,Patricia M.
Description: In this course, students will do intensive work in listening comprehension and oral expression by exploring current events in the Francophone world, with an emphasis on France. The main goals for the course are improvement of listening and speaking skills through the exploration of Francophone current events. Secondary goals include vocabulary expansion and a greater awareness of stylistic variation in French. Intensive practice in listening will be provided using authentic audio and video recordings on current events, and other multi-media materials to be used in and outside of class. Students will write regular journal entries to record vocabulary and content learned through their listening work. Students will practice oral expression through discussions, expressing their opinions on the themes addressed in the course, comparing and contrasting with similar themes/situations in the U.S. They will do oral summaries of aural and textual materials and participate in role-plays and debates. They will also be able to participate in on-line oral discussions with peers and their instructor outside of class to further their speaking skills and interpretations of cultural content. The course is web-enhanced which allows students to work with authentic audio and video materials at their own pace. Articles on current events can be accessed from the course site to expand on themes addressed in the course and further develop linguistic and cultural skills. Beyond resources made available, students will need to use the Internet regularly for listening practice and to prepare for oral presentations. No text required.
Style: 15% Film/Video, 30% Discussion, 25% Small Group Activities, 20% Student Presentation, 10% Web Based.
Grading: 20% final exam, 18% special projects, 7% quizzes, 25% written homework, 22% in-class presentation, 8% class participation.

FREN 3101W Introduction to French Literature
4 credit(s); prereq 3015 or equiv; Meets CLE req of Literature; meets CLE req of Writing Intensive;
Instructor: Brewer,Maria M
Description: This course is an introduction to literature and methods of literary analysis for students preparing a major or minor in French. This course treats selected works of French and Francophone literature from the Early Modern to the Modern Period. Students learn to identify the salient features of the major genres, to apply techniques of close textual reading, and to write critical analyses of poetry, fictional prose, and plays. Works are analyzed from various perspectives with a view to understanding their place in literary history and cultural context. Some key topics of the course will be subjectivity, language, narration, description, rhetorical figures, identity, power, and desire. Writing is an important component of this class; class discussions and oral assignments will focus not only on understanding literary works but also on how they function, so that students may apply skills developed through discussion to their written assignments.
Style: 60% Lecture, 40% Discussion.
Grading: 20% final exam, 60% reports/papers, 20% class participation.
Exam Format: essay

FREN 3101W Introduction to French Literature
4 credit(s); prereq 3015 or equiv; Meets CLE req of Literature; meets CLE req of Writing Intensive;
Instructor: Chauvat,Bruno
Description: Student may contact the instructor or department for information.

FREN 3140 Topics in Medieval and Renaissance Literature
3 credit(s), max credits 9, 3 completions allowed; prereq

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
Schedule.

Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class University of Minnesota - Course Guide for Twin Cities Campus Fall 2011

conversation and analysis of data by means of a concordancer readings, hands-on work such as transcription of recordings of real-world language). Outside-of-class preparation will include and analyses will be illustrated with data from the Minnesota French from more formal styles of the language. Descriptions morphological features which distinguish colloquial spoken language? This seminar will explore these questions. The main language, no matter what the language, differ from written French you've heard spoken in France? How does oral Are you confused, or intrigued, by the differences Description:

Kerr,Betsy Jean

Marguerite de Navarre and Montaigne, in editions with modernized spelling. Marguerite de Navarre, selections from the Heptameron; Rabelais, Gargantua and Pantagruel; Montaigne, selected essays; and Du Bellay, Defense et Illustration de la Langue francaise. Class conducted in French. The semester will begin with a workshop in reading sixteenth-century French, and no prior experience with the early language is expected. The texts of Rabelais will be read in modern French translation, those of Marguerite de Navarre and Montaigne, in editions with FREN 3471 Topics in Francophone African Literature and Cultures 3 credit(s); prereq 3101W; Meets CLE req of Global Perspectives;

Instructor: Preckshot,J E

Description: Francophone African Literature and Culture: ?Children in the crossfire? In traditional societies, children are an integral part of a family?s economic and social life; they are cherished for their contributions and because they represent the future of the family and the larger community. But what happens when family and communal structures are undermined by social upheaval, political strife and economic distress? The novels, films and essays studied in this class undertake to answer this question by foregrounding the impact of neglect, cultural changes, war and genocide on children. By strategically telling their stories from the perspective of children and adolescents, novelists and filmmakers decry the external forces (the legacy of colonialism and neocolonial intervention) and corruption internal to African states that have led to the perversion of traditional values, and in some cases cultural devastation and social and political violence. By setting children metaphorically in the crossfire of social and political forces, they challenge readers and viewers to imagine Africa?s future.

FREN 3541 Oral Discourse of French 3 credit(s); prereq 3015; Ling 3001 recommended;

Instructor: Kerr,Becky Jean

Description: Are you confused, or intrigued, by the differences between the formal French you've learned in class, and the 'real' French you've heard spoken in France? How does oral language, no matter what the language, differ from written language? This seminar will explore these questions. The main course texts are Ball, ?Colloquial French Grammar?, and Blanche-Benveniste ?Approches de la langue parlée en Français?. Ball's text is a thorough treatment of the syntactic and morphological features which distinguish colloquial spoken French from more formal styles of the language. Descriptions and analyses will be illustrated with data from the Minnesota Corpus and other available electronic corpuses (large samples of real-world language). Outside-of-class preparation will include readings, hands-on work such as transcription of recordings of conversation and analysis of data by means of a concordancer (glorified search engine - instruction provided), in-class presentations, and one course project. Readings in French and English, class discussion and assignments in French. The course is intended for advanced undergraduates and graduate students with an interest in French linguistics. Note: This course is NOT A CONVERSATION COURSE. Ideally, students should have some background in linguistics (either French or general), but students with advanced proficiency in French (minimum Fren 3015, preferably 3016) may be admitted without prior linguistics coursework.

Style: 20% Lecture, 60% Discussion, 10% Student Presentation, 10% Web Based.

Grading: 10% reports/papers, 25% special projects, 5% quizzes, 15% written homework, 25% in-class presentation, 20% class participation.

FREN 3650 Topics in French/Francophone Cultures 3 credit(s), max credits 9, 3 completions allowed; prereq 3015;

Instructor: Sugnet,Charles J

Description: Student may contact the instructor or department for information.

FREN 3712 Reading Libertinism 3 credit(s); prereq 3101, French majors/minors only; Meets CLE req of Arts/Humanities; meets CLE req of Civic Life and Ethics;

Instructor: Cherbuliez,Juliette

Description: Student may contact the instructor or department for information.

FREN 4001 Beginning French 2 credit(s); prereq Grad student;

Instructor: STAFF

Description: This course is intended for students with NO previous study of French, or students who have not studied French in recent years (gap of 3 years or more). If you have more than two years of high school French completed within the last year or two, you should register for Fren 4022 which provides students with an accelerated review of Fren 4001 material followed by material covered in Fren 4002. For further information on placement, see your advisor or contact the Department of French and Italian. Fren 4001 is a theme-based course. Students develop their communication skills in French in different areas: speaking, writing, listening and reading. In addition to linguistic skills, students develop a better understanding of diverse aspects of French-speaking cultures. Themes addressed in the course include: student life, family, recreation, life in Francophone cities, housing, Francophone heritage in Northern America and Canada. The text, "Deux Mondes, "6th ed., is accompanied by an electronic workbook (Quia) with a variety of practice activities including listening ones, designed to be used by students outside of class. In the "Deux Mondes" textbook students will work with materials from "Premiere Etape" through Ch. 5. Since the majority of class is devoted to communication activities, class attendance is fundamental. Expect an average of 1.5 hours of outside preparation for each class session hour.

Style: Combination of whole-class and small-group activities

Grading: 10% mid exam, 15% final exam, 12% reports/papers, 8% special projects, 10% quizzes, 25% other evaluation. written exams; 12% oral tests; 8% workbook exercises.

Exam Format: All exams evaluate listening, vocabulary, grammar, writing, reading and culture.

FREN 4002 Beginning French 2 credit(s); prereq Grad student; Credit will not be granted if credit has been received for: FREN 1022;

Instructor: STAFF

Description: Fren 4002 is intended for students who have completed Fren 4001 or the equivalent. In this course students build on the interpersonal, interpretive and presentational skills developed in first-semester French and on their knowledge and understanding of Francophone practices and products. Culture is taught through multimedia and cultural readings. Fren 4002 is a theme-based course. Themes addressed in this course include:
Francophone youth, food, geography, the environment, travel, education and employment. The text, "Deux Mondes," 6th ed., is accompanied by an electronic workbook (Quia/Centro) with a variety of practice activities including listening ones, designed to be used by students outside of class. In the "Deux Mondes" textbook students will work with materials from Ch. 6 through Ch. 10. Since the majority of class is devoted to communication activities, class attendance is fundamental. Expect an average of 1.5 hours of outside preparation for each class session hour.

**Style:** Mostly discussion and student involvement in pair/group activities

**Grading:** 30% written exams, 15% oral exams, 13% final exam, 12% reports/papers, 13% special projects, 12% quizzes, 5% workbook exercises

**Exam Format:** All exams evaluate listening, vocabulary, grammar, writing, reading and culture. Oral skills are assessed in pair discussions.

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**FREN 4003 Intermediate French**

**2 credit(s); prereq Grad student;**

**Instructor:** STAFF

**Description:** Prereq: 1002 or 1022 or Entrance Proficiency Test (LPE) and earn a text line on their transcript endorsing their proficiency in French.

**Style:** Mostly discussion and student involvement in pair/group activities

**Grading:** 15% final exam, 20% reports/papers, 5% quizzes. 10% email exchanges and other assignments, 30% written exams, 15% oral exams, 5% workbook exercises

**Exam Format:** Exams assess a student's listening, reading, speaking and writing proficiency. Oral exams are administered in pairs, written exams involve answering short questions and essay writing.

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**FREN 4022 Accelerated Beginning French**

**2 credit(s); prereq Grad student; Credit will not be granted if credit has been received for: FREN 1002;**

**Instructor:** STAFF

**Description:** Prereq: 2 or more yrs high school French This beginning French course for false beginners is intended for students who have previously studied French in high school or at a community college, or who are transfer students, while Fren 4001 is a course for students with no previous French studies. The Fren 4022 course begins with a review of Fren 4001 materials (Ch. preliminaire through Ch. 5 in "Deux Mondes" 6th ed.), followed by materials introduced in Fren 4002 (Ch. 6 through Ch. 10). In other words, the course allows students to learn first-year materials in one semester. Upon entering Fren 4022 students should be familiar with basic vocabulary related to daily life and daily survival situations, present and past tenses (please note: "passe compose" will be reviewed and "imparfait" will be introduced). Fren 4022 is a theme-based course. Themes addressed in this course include: student life, family, recreation, housing, Francophone heritage in North-America, Francophone youth, food, geography, the environment, travel, education and employment. Students develop knowledge and understanding of Francophone practices and products through multimedia and cultural readings. The text, "Deux Mondes," 6th ed., is accompanied by an electronic workbook (Quia/Centro) with a variety of practice activities including listening ones, designed to be used by students outside of class. Since the majority of class is devoted to communication class attendance is fundamental.

**Grading:** 36% written exams, 15% oral exams, 13% final exam, 12% reports/papers, 10% special projects, 7% quizzes, 7% workbook exercises

**Exam Format:** All exams evaluate listening, vocabulary, grammar, writing, reading and culture. Oral skills are assessed in pair discussions.

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**FREN 4970 Directed Readings**

**1-4 credit(s), max credits 9, 9 completions allowed; prereq instr consent;**

**Instructor:** STAFF

**Description:** Student may contact the instructor or department for information.

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**FREN 5995 Directed Teaching**

**S-N only, 1-6 credit(s), max credits 24, 4 completions allowed; prereq instr consent;**

**Instructor:** Kerr,Betsy Jean

**Description:** Student may contact the instructor or department for information.

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**FREN 5995 Directed Teaching**

**S-N only, 1-6 credit(s), max credits 24, 4 completions allowed; prereq instr consent;**

**Instructor:** Fulk,Jonathan K

**Description:** Student may contact the instructor or department for information.

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**FREN 8210 Narrative, History, and Memory:**

**Topics 3 credit(s), max credits 9, 3 completions allowed;**

**Instructor:** Noakes,Susan J

**Description:** Student may contact the instructor or department for information.
FREN 8270 Critical Issues: Prose
3 credit(s), max credits 12, 4 completions allowed;
Instructor: Brewer,Maria M
Description: French 8270: Critical Issues: Prose Literature Out of Bounds in Modern and Contemporary France The questions of the literary and its boundaries (or lack of them) have undergone dramatic changes in response to historical situations and events as well as to the propositions of avant-garde aesthetics and its various forms of experimentation. This course aims to provide the opportunity for discussing selected narrative and critical works that have contributed significantly to redefining the boundaries for an understanding of literature and the socio-symbolic conditions for representation in modernity. Seminar readings and discussions will be organized according to the following topics: 1) The novel and subjectivity in the early 20th Century; 2) What is literature in existentialist thought and action? 3) The Novel reconsidered; 4) Boundaries of the subject in la societe de fiction. Literary works will be selected from the following: Marcel Proust, Louis-Rene des Forets, Nathalie Sarraute, Samuel Beckett, Alain Robbe-Grillet, Claude Simon, Georges Perec, Monique Wittig, Marguerite Duras, Amelie Nothomb, Marie Darrieussecq, and Kossi Efoui. (Note: no more than six texts will be selected from the above for common reading, but all of the above as well as the critical theorists below may be chosen as subjects for the presentation and/or the seminar paper). In conjunction with these works, we will read essays by theorists who have engaged with the notion of literature and its status in history, culture, and critical thought. Selections will be made from writings by the following: Jean-Paul Sartre, Simone de Beauvoir, Roman Jakobson, Julia Kristeva, Roland Barthes, Fredric Jameson, Helene Cixous, Maurice Blanchot, Paul de Man, and Jacques Ranciere. The course will be conducted in French. If you have a reading knowledge of French, you are welcome to participate in either English or French. Style: 40% Lecture, 60% Discussion. Grading: 70% reports/papers, 10% in-class presentation, 20% class participation.

FREN 8420 Critical Issues: Francophone Literature
3 credit(s), max credits 9, 3 completions allowed;
Instructor: Preckshot,J E
Description: The inspiration for this course, subtitled: ?Fren 8420: In Transit: Africans Between Two Worlds, ? is Abdourrahman A. Waberi?s 2003 novel, ?Transit.? In this novel two political refugees, one an intellectual and the other a simple foot soldier, narrate their life stories while waiting, in administrative limbo, in a detention zone at the Charles de Gaulle airport. Waberi?s novel sets the stage for an examination of the ways in which the histories of Africans and the French have intertwined for four centuries, as well as how colonial history has conditioned both the relation of Africans to France and francophone Europe?in real and symbolic terms?and their reception on European soil. What circumstances, real or fantasized, draw Africans to francophone Europe? How are Africans viewed by Europeans, that is, under what conditions do Africans become visible to Europeans? Does their visibility, or lack thereof, favor inclusion or exclusion? And why have certain African writers chosen to leave their protagonists in an unsettled or transitional state?between continents, cultures and identities?rather than set them on the more straightforward course of implantation reflected in narratives of immigration? In addition to Waberi?s ?Transit,? we will read Claire de Duras? ?The End of the Road,? ?Black and White in Pink,? ?The Lover,? ?A Year of Love,? and ?The Glass.?? Ourselves? and the Other?exploring different forms of identification and the ways in which these forms determine the boundaries of representation and the representation of the Other. The different forms of identity that characterize the Francophone world may include: 1) the post-colonial subject in la societe de fiction. Literary works will be selected from the following: Jean-Paul Sartre, Simone de Beauvoir, Roman Jakobson, Julia Kristeva, Roland Barthes, Fredric Jameson, Helene Cixous, Maurice Blanchot, Paul de Man, and Jacques Ranciere. The course will be conducted in French. If you have a reading knowledge of French, you are welcome to participate in either English or French. Style: 40% Lecture, 60% Discussion. Grading: 70% reports/papers, 10% in-class presentation, 20% class participation.

FREN 8992 Directed Readings for Graduate Students
1-5 credit(s), max credits 25, 25 completions allowed; prereq instr consent;
Instructor: Preckshot,J E
Description: Student may contact the instructor or department for information.

FREN 8992 Directed Readings for Graduate Students
1-5 credit(s), max credits 25, 25 completions allowed; prereq instr consent;
Instructor: Wall-Romana,Christophe M
Description: Student may contact the instructor or department for information.

FREN 8992 Directed Readings for Graduate Students
1-5 credit(s), max credits 25, 25 completions allowed; prereq instr consent;
Instructor: Franklin-Brown,Mary
Description: Student may contact the instructor or department for information.

GWSS 1005 Engaging Justice
3 credit(s);
Instructor: Isoke, Zenzele
Description: Student may contact the instructor or department for information.

GWSS 3002 Gender, Race, and Class: Women's Lives in the United States
3 credit(s); Meets CLE req of Diversity and Soc Justice US;
Instructor: Isoke, Zenzele
Description: The objective of this course is get students to systematically interrogate the categories that we use to make sense of class, race and gender. Throughout this course we will encounter readings that document the experiences, representations and empirical realities of class, sex and race in local, translocal, and transnational contexts. This course will actively confront issues of racism, sexism, heterosexism, American nationalism and colonialism. We will critically examine media as a key site through which representations of raced, sexed, and gendered bodies circulate and proliferate under neoliberalism, as well as consider the implications of these representations on specific communities.

GWSS 3004W Point/Counterpoint: Contemporary Feminist Debates
3 credit(s); Meets CLE req of Civic Life and Ethics; meets CLE req of Writing Intensive;
Instructor: Puotinen,Sara Lynne
Description: Student may contact the instructor or department for information.

GWSS 3307 Feminist Film Studies
3 credit(s); Meets CLE req of Arts/Humanities; meets CLE req of Diversity and Soc Justice US;
Instructor: Zita,Jacquelyn N
Description: WOMEN'S ROAD FILMS Rebel road movies and buddy movies are often films about men in the wilderness, on the team, at war or on the open road. This course will examine a genre of film that focuses on women's road films as well as films about non-normative bodies on road trips to freedom. love, adventure and community. Starting with classic road films, such as "Easy Rider" and "Bonnie and Clyde," our study will carry us to a collection of "other road" movies, such as "Thelma and Louise," "Leaving Normal," "Boys on the Side," "Motorcycle Diaries," "Set It Off," "TransAmerica," "PawWow Highway," "Searching for Angela Shelton," "Strawberry Fields," and others. By using tools from contemporary film and cultural theory, we will examine the dynamics of gender, race, sexuality and class "on the road," as well as complex relationships surrounding identity, home, abjection, desire and freedom.

GWSS 3415 Feminist Perspectives on Domestic Violence and Sexual Assault
A-F only, 3 credit(s); Meets CLE req of Diversity and Soc...
Justice US;
Instructor: Schuster, Mary Lay
Description: This course focuses on the history of and contemporary thinking about activism, social change, public policies, and legal remedies directed toward sexual assault and domestic violence in the US, particularly from the point of view of feminist perspectives. The course deals, for example, with how notions of privacy and assumptions about traditional gender roles contribute to attitudes toward stranger sexual assault and intimate partner violence. Readings in the course offer insight into early links between slavery and rape, between the temperance movement and domestic violence, and between views of child abuse and sexual abuse, as well as the increasing roles of psychiatry and social work in addressing such violence. The course traces how these historical foundations and cultural attitudes help determine contemporary responses by legal officials, and the course covers such diverse topics as the impact of HIV/AIDS on rape survivors; sexual abuse of men in prison; incest; child abuse; and sex offender treatment. Students read a memoir (Alice Sebold's Lucky) about surviving sexual assault and view a film (The Accused) as well as reading historical and analytical texts. Students will visit the domestic violence court in Hennepin County, and the course ends with a close look at a project by the president of William Mitchell Law School on sexual predator laws, such as civil commitment and community notification, in terms of their effectiveness, feminist perspectives, and impact on Constitutional rights. Other speakers include the executive director of the non-profit courtroom monitoring organization, WATCH, and the head of the Minneapolis Police Department Sex Crimes Unit.
Style: 5% Film/Video, 75% Discussion, 10% Small Group Activities, 5% Field Trips, 5% Guest Speakers.
Grading: 25% mid exam, 30% final exam, 5% reports/papers, 10% quizzes, 20% reflection paper, 10% class participation.
Exams are essay take-home exams

GWSS 8106 Feminist Theories and Methods I
3 credit(s); prereq Feminist studies PhD or grad minor student or instr consent;
Instructor: Zita, Jacquelyn N
Description: Two-semester interdisciplinary seminar. First term: current debates in gender theory; intersections of gender theory with critical race theory, post-colonial theory, sexuality theory, and social class analysis. Second term: inter-/multi-disciplinary feminist research frameworks/methodologies from humanities and social sciences. 8108 is the first in the two-semester seminars.

GWSS 8190 Topics: Feminist Theory
1-3 credit(s), max credits 12, 12 completions allowed;
Instructor: Torres PhD, Eden E.
Description: Student may contact the instructor or department for information.

GWSS 8996 Feminist Studies Colloquium
S-N only, 1 credit(s), max credits 4, 4 completions allowed; prereq Grad major or minor in feminist studies;
Instructor: Zita, Jacquelyn N
Description: Student may contact the instructor or department for information.

GWSS 8997 Feminist Research and Writing
1-3 credit(s), max credits 9, 3 completions allowed; prereq 8109, passed written prelims in degree granting program;
Instructor: Kunzel, Regina G
Description: Student may contact the instructor or department for information.

GEND 5152 Advanced General Dentistry Seminar II
S-N only, 5-10 credit(s), max credits 10, 1 completion
Instructor: Gend, Gwendolyn
Description: Student may contact the instructor or department for information.

GEND 5255 Advanced General Dentistry Clinic II
S-N only, 5-10 credit(s), max credits 15, 1 completion allowed;
Instructor: Gambucci, James Robert
Description: Student may contact the instructor or department for information.

GEND 5262 Advanced General Dentistry Clinical Administration II
S-N only, 5-10 credit(s), max credits 10, 1 completion allowed;
Instructor: Gambucci, James Robert
Description: Student may contact the instructor or department for information.

GEND 5265 Advanced General Dentistry Clinic V
S-N only, 1-15 credit(s), max credits 15, 1 completion allowed;
Instructor: Gambucci, James Robert
Description: Student may contact the instructor or department for information.

GEND 6152 General Practice Seminar II
S-N only, 5-10 credit(s), max credits 10, 1 completion allowed;
Instructor: Gambucci, James Robert
Description: Student may contact the instructor or department for information.

GEND 6255 General Practice Clinic II
S-N only, 10-15 credit(s), max credits 15, 1 completion allowed;
Instructor: Gambucci, James Robert
Description: Student may contact the instructor or department for information.

GEND 6262 General Practice Clinical Administration II
S-N only, 5-10 credit(s), max credits 10, 1 completion allowed;
Instructor: Gambucci, James Robert
Description: Student may contact the instructor or department for information.

GEND 6265 General Practice Clinic V
S-N only, 10-15 credit(s), max credits 15, 1 completion allowed;
Instructor: Gambucci, James Robert
Description: Student may contact the instructor or department for information.

GCD 2002 Ethical and Social Challenges in Genetics
A-F only, 3 credit(s); prereq BIOL 1009 or equiv; Meets CLE req of Technology and Society;
Instructor: LeRoy, Bonnie S
Description: Student may contact the instructor or department for information.

GCD 3022 Genetics
3 credit(s); prereq BIOL 1002 or BIOL 1009; Credit will not be granted if credit has been received for: BIOL 4003;
Instructor: Shaw, Jocelyn E
Description: Student may contact the instructor or department for information.

Genetics, Cell Biology and Development
6-160 Jackson Hall

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
GCD 3022 Genetics
3 credit(s); prereq BIOL 1002 or BIOL 1009; Credit will not be granted if credit has been received for: BIOL 4003;
Instructor: Brooker, Robert James
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. This course is intended to provide students with a broad understanding of genetics. In the first part of the course, the emphasis will be on inheritance patterns. We will be interested in many types of inheritance patterns, including simple "Mendelian" inheritance, extrachromosomal inheritance, linkage, and quantitative traits that are determined by multiple genes. We will then examine the structure, replication, and expression of the genetic material known as deoxyribonucleic acid (DNA). This will involve an understanding of the molecular structure of DNA and its organization into units called genes. The last part of the course will examine genetic technologies.
Style: This is a printed correspondence section.
Grading: 45% mid exam, 45% final exam, 10% written homework.
Exam Format: Supervised, in-person exams

GCD 3022 Genetics
3 credit(s); prereq BIOL 1002 or BIOL 1009; Credit will not be granted if credit has been received for: BIOL 4003;
Instructor: Conkle,Kathleen F
Description: This course is intended to provide an overview of genetics. The areas that will be covered include general principles of Mendelian, population, and molecular genetics. A portion of the course will also be devoted to developing problem-solving skills applicable to genetics and to the design of molecular and cellular experiments. Students are expected to have already taken an undergraduate course in General Biology.

GCD 4143 Human Genetics
3 credit(s); prereq 3022 or Biol 4003 or instr consent;
Instructor: Van Ness,Brian George
Description: Student may contact the instructor or department for information.

GCD 4161 Developmental Biology
3 credit(s); prereq Biol 4003; Concurrent registration is required (or allowed) in BIOL 4004 is recommended;
Instructor: Rougvie,Ann E
Description: This course is intended for upper level undergraduates who have had previous courses in genetics and cell biology and who have an interest in understanding developmental mechanisms. The course will present a comprehensive discussion of developmental biology with emphasis on recent findings, particularly concerning the molecular mechanisms involved. The course will focus on development in model organisms, including nematodes, fruit flies, mice, zebrafish, frogs, and chicks, as well as discussion of human development as appropriate. Students will learn fundamental regulatory mechanisms common to developmental programs in most animals, in addition to understanding the differences that exist among species. Topics to be covered include fertilization, formation of the body plan, sex determination, limb formation, regeneration, and developmental disruptions caused by teratogens. Experimental approaches to development will be emphasized. The textbook utilized will be Scott Gilbert's, "Developmental Biology:" 8th edition, 2006. The course is web-enhanced, with a course website, as well as a textbook website (http://www.devbio.com/).
Style: 90% Lecture, 10% Discussion.
Grading: 52% mid exam, 34% final exam, 14% problem solving.
Exam Format: Essay, some short answer

GCD 4793W Directed Studies: Writing Intensive
S-N only, 1-7 credit(s), max credits 7, 7 completions allowed;
prereq instr consent, dept consent; Meets CLE req of Writing Intensive;
Instructor: LeRoy,Bonnie S
Description: This course is intended for upper level students who have already taken an undergraduate course in General Biology.
Style: This is a printed correspondence section.
Grading: 45% mid exam, 45% final exam, 10% written homework.
Exam Format: Essay, some short answer

GCD 4793W Directed Studies: Writing Intensive
S-N only, 1-7 credit(s), max credits 7, 7 completions allowed;
prereq instr consent, dept consent; Meets CLE req of Writing Intensive;
Instructor: Sanderfoot,Anton
Description: Student may contact the instructor or department for information.

GCD 4793W Directed Studies: Writing Intensive
S-N only, 1-7 credit(s), max credits 7, 7 completions allowed;
prereq instr consent, dept consent; Meets CLE req of Writing Intensive;
Instructor: Voytas,Daniel F
Description: Student may contact the instructor or department for information.

GCD 4794W Directed Research: Writing Intensive
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed;
prereq instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Streiffel,Andrew Joseph
Description: Student may contact the instructor or department for information.

GCD 4794W Directed Research: Writing Intensive
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed;
prereq instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Largaespada,David Andrew
Description: Student may contact the instructor or department for information.

GCD 4794W Directed Research: Writing Intensive
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed;
prereq instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Bardwell,Vivian June
Description: Student may contact the instructor or department for information.

GCD 4794W Directed Research: Writing Intensive
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed;
prereq instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Zarkower,David A
Description: Student may contact the instructor or department for information.

GCD 4794W Directed Research: Writing Intensive
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed;
prereq instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Simmons,Michael J
Description: Student may contact the instructor or department for information.

GCD 4794W Directed Research: Writing Intensive
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed;
prereq instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Largaespada,David Andrew
Description: Student may contact the instructor or department for information.

GCD 4794W Directed Research: Writing Intensive
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed;
prereq instr consent , dept consent ; Meets CLE req of Writing Intensive;
Instructor: Streiffel,Andrew Joseph
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
GCD 4994W Directed Research: Writing Intensive  
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent; Meets CLE req of Writing Intensive; 
Instructor: Ohlfest, John R  
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research  
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent; 
Instructor: Ibzzo PhD, Paul Anthony  
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research  
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent; 
Instructor: Largespada, David Andrew  
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research  
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent; 
Instructor: Kirkpatrick, David T  
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research  
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent; 
Instructor: Kirkpatrick, David T  
Description: Student may contact the instructor or department for information.

GCD 4994W Directed Research: Writing Intensive  
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent; Meets CLE req of Writing Intensive; 
Instructor: Kirkpatrick, David T  
Description: Student may contact the instructor or department for information.

GCD 4993 Directed Studies  
S-N only, 1-7 credit(s), max credits 7, 7 completions allowed; prereq instr consent, dept consent; 
Instructor: Voytas, Daniel F  
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research  
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent; 
Instructor: Gornick Jr, Charles Calvin  
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research  
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent; 
Instructor: Ohlfest, John R  
Description: Student may contact the instructor or department for information.
Schedule.
Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class
This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online
University of Minnesota - Course Guide for Twin Cities Campus Fall 2011
GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Jemmerson, Ronald R
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Kuriyama, Ryoko
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Panoskaltsis-Mortari, Angela
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Hering, Bernhard J.
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Stephens, David William
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Kratzke, Robert Arthur
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Yee, Douglas
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Petryk, Anna
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Ferrington, Deborah Ann
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Sachdev, Deepali
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Yuan, Ching
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Hall, Jennifer L.
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Marchant, Jonathan S
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Clarke, Duncan John
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Chen, Lihsia
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Verneris, Michael Richard
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Koepp, Deanna
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Chen, Lihsia
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Koepp, Deanna
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Wright, Robin
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Nakato, Hiroshi
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Taylor PhD, Doris A
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions
allowed; prereq instr consent , dept consent ;
Instructor: Conner PhD, Sean
Description: Student may contact the instructor or department
GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent;
Instructor: Fleischmann, William Robert
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent;
Instructor: Firpo, Meri
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent;
Instructor: Gammill, Laura Susan
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent;
Instructor: Gralnick, Jeffrey A
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent;
Instructor: Hirsch, Betsy Anne
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent;
Instructor: Huang, Haojie
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent;
Instructor: Hays, Tom S
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent;
Instructor: Heldrickson, Eric A
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent;
Instructor: Koob, Michael D
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent;
Instructor: LeRoy, Bonnie S
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent;
Instructor: Perlingeiro, Rita C.R.
Description: Student may contact the instructor or department for information.

GCD 4994 Directed Research
S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent;
Instructor: Bagchi, Anindya
Description: Student may contact the instructor or department for information.

GCD 5036 Molecular Cell Biology
3 credit(s); prereq Biol 4004 or instr consent; [sr or grad student] recommended;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

GCD 8151 Cell Structure and Function
3 credit(s); prereq [[4034 or 8121 or BioC 8002], Biol 4004] or BMBB or MCDB
Description: Concurrent registration is required (or allowed) in G grad student or instr consent;
Instructor: Hays, Tom S
Description: Student may contact the instructor or department for information.

GCD 8171 Literature Analysis
A-F only, 2 credit(s); prereq Grad MCDG major;
Instructor: Shaw, Jocelyn E
Description: Student may contact the instructor or department for information.

GCD 8213 Selected Topics in Molecular Biology
4 credit(s); prereq 8121 or BioC 8002 or instr consent; Credit will not be granted if credit has been received for: BIOC 8213;
Instructor: Berman, Judith G
Description: Student may contact the instructor or department for information.

GCD 8900 Seminar
S-N only, 1-2 credit(s), max credits 8, 4 completions allowed; prereq Grad MCDG major or instr consent;
Instructor: Berman, Judith G
Description: Student may contact the instructor or department for information.

GCD 8900 Seminar
S-N only, 1-2 credit(s), max credits 8, 4 completions allowed; prereq Grad MCDG major or instr consent;
Instructor: Koob, Michael D
Description: Student may contact the instructor or department for information.

GCD 8913 Psychosocial Issues in Genetic Counseling
A-F only, 3 credit(s); prereq MCDG MS student with genetic counseling specialization or instr consent;
Instructor: LeRoy, Bonnie S
Description: Student may contact the instructor or department for information.

GCD 8920 Special Topics: Genetics and Reproduction: Law and Ethics
A-F only, 2 credit(s); prereq Grad student or instr consent;
Instructor: Ahrens, Mary Jarvis
Description: Student may contact the instructor or department for information.

GCD 8993 Directed Studies
1-5 credit(s), max credits 15, 15 completions allowed; prereq MCDG MS student with genetic counseling specialization or instr consent;
Instructor: Hirsch, Betsy Anne
Description: Student may contact the instructor or department for information.
GIS 5530 GIS Internship
S-N only, 1-3 credit(s); max credits 6; prereq instr consent, strong GIS/mapping skills; Instructor: McMaster,Susanna Akiko
Description: Student may contact the instructor or department for information.

GIS 5555 Basic Spatial Analysis
3 credit(s); prereq [Stat 3001 or equiv, MGIS student] or instr consent; Instructor: Manson,Steven M.
Description: Subject. Spatial analysis is used to understand a range of human and environmental systems, their patterns and dynamics, and their interactions with the broader world. Students in this course have tended to come from across the social, natural, and information sciences with no clear majority in any one area. This distribution makes for a lively and challenging meeting of the minds. The course is oriented towards Masters, MGIS, or PhD students. Advanced undergraduates are invited to speak with the instructor to determine if they would find the course appropriate to their educational goals. Purpose. This course expands on aspects of GISc and statistics covered by previous courses. It is designed to give hands-on experience with advanced methods in geographic, spatial, and statistical research. Goals. Students who successfully complete this course will be able to use a range of spatial analysis tools to explore the patterns and dynamics of almost any problem that has a spatial element. Depending on student orientation, this course can be used to gain insight into the technical underpinnings of introductory spatial analysis, complement on-going research, or provide an applied focus for research or policy. Prior experience. Students should be proficient in GIS, basic mathematics, and standard statistical methodology including descriptive statistics and bivariate regression. As noted above in the prerequisites, this translates into having at least one statistics course and the Principles of GIS course or its equivalent. Students without this experience fare poorly in this course. Structure. This is an intensive hands-on class with a focus on reading, discussion, and applications. This translates into 30% Lecture, 20% Discussion, 50% Laboratory. Style: 30% Lecture, 20% Discussion, 50% Laboratory. Grading: 35% reports/papers, 10% class participation, 55% laboratory evaluation.

GIS 5571 ArcGIS I
3 credit(s); prereq [GEOG 5561 or equiv, status in MGIS program, familiarity with computer operating systems] or instr consent; Instructor: Lindberg,Mark B
Description: Student may contact the instructor or department for information.

GIS 5573 Desktop Mapping
1.5 credit(s); prereq Geog 5561 or equiv, Geog 3511 or equiv, status in MGIS program or instr consent; Instructor: Hansen,Catherine Lucia
Description: An introduction to desktop mapping fundamentals using ESRI ArcGIS software. This course emphasizes the display and analysis of geographical data. It is a perfect course for new users as well as advanced user looking to brush up on current changes in the software.

GIS 5574 GIS and the Internet
1.5 credit(s); prereq Geog 5561 or equiv, status in MGIS program or instr consent; Instructor: Fischer,Brian Charles
Description: GIS 5574 is an 8 week introduction to the many ways GIS data, maps and applications can be used to provide content over the Internet. The course is geared towards students who are familiar with the World-Wide Web and that have a working knowledge of GIS. Students will gain experience through browsing of the web, and ultimately will develop their own web site and interactive mapping and spatial query application. The course is an introductory level and assumes students have little to no experience in developing web pages and applications. Attention will be paid to the wide variety of technologies available to Web GIS developers. The course will make use of dozens of examples delivering GIS content via the Internet and will examine the pros and cons to each approach. The main goal of the course is that students will have a general understanding of Web GIS technologies and be able to select and apply the appropriate technologies in a real-world setting. The course will cover examples of Web GIS software such as Google Maps API, Open Source MapServer and ESRI ArcGIS Server. The objectives of the course will be to gain a high level understanding of different software options available. Finally the course will use GeoMOOSE (www.geomoose.org) and MapServer (www.mapserver.org) as the software packages to build their own web GIS application in a group classroom project. Style: 40% Lecture, 10% Discussion, 30% Student Presentation, 20% Demonstration.

GIS 5575 GIS Internship
S-N only, 1-3 credit(s); max credits 6; prereq instr consent, strong GIS/mapping skills; Instructor: McMaster,Susanna Akiko
Description: Student may contact the instructor or department for information.

GIS 5577 GIS Internship
S-N only, 1-3 credit(s), max credits 20, 20 completions allowed; prereq MCDG MS student with genetic counseling specialization or instr consent; Instructor: LeRoy,Bonnie S
Description: Student may contact the instructor or department for information.

GIS 5581 Survey of Geographic Information Science: Past, Present, and Future Trends and Activities
3 credit(s); prereq MGIS student or instr consent; Instructor: McMaster,Susanna Akiko
Description: Student may contact the instructor or department for information.

GIS 6900 MGIS Capstone Project
A-F only, 2-6 credit(s), max credits 6, 3 completions allowed; prereq MGIS, instr consent; Instructor: Lindberg,Mark B
Description: Student may contact the instructor or department for information.

GIS 8990 MGIS Capstone Project
A-F only, 2-6 credit(s), max credits 6, 3 completions allowed; prereq MGIS, instr consent; Instructor: McMaster,Susanna Akiko
Description: Student may contact the instructor or department for information.

GIS 8990 MGIS Capstone Project
A-F only, 2-6 credit(s), max credits 6, 3 completions allowed; prereq MGIS, instr consent; Instructor: Harvey,Francis
Description: Student may contact the instructor or department for information.

GIS 8990 MGIS Capstone Project
A-F only, 2-6 credit(s), max credits 6, 3 completions allowed; prereq MGIS, instr consent; Instructor: Manson,Steven M.
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
4 credit(s); Meets CLE req of Global Perspectives; meets CLE req of Social Sciences; meets CLE req of Writing
Instructor: Sheppard, Eric
Description: GEOG 1301 OUR GLOBALIZING WORLD Spring 2008 T, Th: 11:15-12:30, Willey Hall 125 Instructor: Eric Sheppard 515 social sciences building 625-5840; sbepp001@umn.edu, http://www.geog.umn.edu/Faculty/Sheppard.html Office hours: Tuesdays 2:30-4:30, by appointment Teaching Assistants: Brook Bernini-Galup 444 social sciences building 625-0543, berni071@umn.edu Discussion sections 3&4 (T, Th) Office hours: Tues. 2:30-3:30 Chris Strunk 444 social sciences building 625-0543, struch073@umn.edu Discussion sections 6&7 (M, W) Office hours: Th. 1:30-2:30 Introduction Over the last decade, globalization has become one of the hottest topics in the academy as well as in public discourse. The world indeed feels smaller and smaller, as our everyday lives feel more and more interconnected with global-scale processes, with nature, and with the lives of others far away. Is it true, however, that we live in a global village where geography no longer matters? And is it true that globalization is a new phenomenon? In this course, we will critically assess such presumptions, by learning to think geographically about our globalizing world. Geography is one of the "hidden treasures" of the US educational system. In most other countries students study Geography extensively in elementary and high school, Geography is an important discipline in all the major universities, and students majoring in Geography are in demand in a range of occupations. This is not the case in the United States, where Geography ends up being taught under other names (e.g., global studies, urban studies, environmental studies). The absence of Geography does not simply mean that Americans cannot locate places on a map, however. Geography brings a unique perspective to helping us understand, explain and improve the lives we live. Geography is the quintessential "inter-disciplinary discipline?: Its practitioners examine the relationship between human and societal processes (culture, political, economics, identity) and environmental processes (climatic, hydrological, ecological, geological), using methods that range from hermeneutics to mathematical modeling. This synthetic philosophy makes that geographers are well placed to tackle big inter-disciplinary problems. Geography pays particular attention to the spatial organization of the earth?:s surface: Not only to where things locate and how places take on their distinctive character, but also to how these spatial characteristics shape trajectories of change. In order to do so, geographers pay attention not only to spatial patterns, but to how things evolve over time. Geographers do not just look at the world from the ivory tower but also get out into the world, undertaking fieldwork to draw on local knowledge and appreciate how and why phenomena differ from place to place.
Style: 60% Lecture, 15% Film/Video, 15% Discussion, 5% Small Group Activities, 5% Field Trips. Grading: 15% mid exam, 30% final exam, 30% reports/papers, 25% class participation.
GEOG 1372 Geography of Global Cities 3 credit(s); Credit will not be granted if credit has been received for: GLOS 1672; Meets CLE req of Global Perspectives; meets CLE req of Social Sciences; Instructor: Bloch, Stefano Description: Student may contact the instructor or department for information.
GEOG 1403 Biogeography of the Global Garden 4 credit(s); Meets CLE req of Biological Sciences; meets CLE req of Environment; Instructor: St. George, Scott Description: Student may contact the instructor or department for information.
GEOG 1425 Introduction to Meteorology 4 credit(s); prereq High school algebra; Credit will not be granted if credit has been received for: ESPM 1425; Meets CLE req of Environment; meets CLE req of Physical Sciences; Instructor: Klink, Katherine Description: Weather is part of our everyday lives, sometimes memorably so, such as when we experience snowstorms, hurricanes, tornadoes, or heat waves. Our society also is increasingly concerned about environmental issues such as ozone depletion and climate change, which have a fundamental atmospheric component. What do we understand about how the atmosphere works? How might our own actions affect weather and climate? Our goals for this course are: 1) learn about weather and climate, including the physical laws that govern the atmosphere, the current tools and technologies used to study the atmosphere, and to interpret weather and climate data; 2) experience and gain insight into the nature of science and scientific uncertainty; 3) become better able to evaluate critically scientific questions and claims, especially those concerning the human impacts on the atmosphere; 4) understand the limits to what we know about weather, climate, and climate change; and 5) reflect on our roles and responsibilities as agents of local and global environmental change, especially as related to the atmosphere. Goals 1-3 are directly related to the objectives of the Physical Science Core: to learn about key basic concepts and consequences regarding the natural laws, processes, and properties of matter and energy; to use basic research methods such as observation, hypothesis formation/testing, and/or computer simulations; understanding the limits and uncertainty associated with these methods; and to become more informed about the scientific basis of claims about climate and environmental change. Goals 4-5 are directly related to the objectives of the Environment Theme: to inform your understanding of the interrelationships between the non-human environment (e.g., the atmosphere) and human society; to introduce you to important underlying scientific principles within environmental issues, particularly as related to the atmosphere; to consider the possibilities and limitations of various technologies, practices, and policies aimed at adapting to, and/or mitigating, the potentially negative impacts of global climate change; and to reflect on our ethical commitments as global citizens on the issue of climate/environmental change. Questions we will try to answer include: What makes the wind blow? Why don't all clouds produce rain? What causes thunderstorms and tornadoes? How do satellites work? How does El Ni?o affect the weather in North America? How do you make a weather forecast? Are human activities really affecting the atmosphere? What is the greenhouse effect, and should we be concerned about it? What do we know about climate change? This course fulfills the CLE Physical Science with Lab Core, and the Environment Theme. Prerequisites: Students are expected to be familiar with pre-college algebra (at the level of the standard University entrance requirement).
Style: 60% Lecture, 10% Discussion, 30% Laboratory. Grading: 25% final exam, 30% additional semester exams, 45% laboratory evaluation.
Exam Format: multiple choice, short answer.
GEOG 1502 Mapping Our World 3 credit(s); Meets CLE req of Technology and Society; Instructor: Manson, Steven M. Description: People have long used maps, ranging from scratching their view of the world on clay tablets to developing sophisticated web-based mapping systems. We will map our world by understanding how maps work, making our own maps, mapping virtual worlds like Facebook and video games, and understanding how people use maps to tell stories and lies. Along the way, we will see how mapping is a useful lens through which to understand interactions between technology and society.
Style: 30% Lecture, 20% Discussion, 20% Small Group Activities, 30% Web Based. Two days a week we will meet in person for lectures and hand-on workshops while the third day will feature online lab work that students can do in an actual computer lab or from another computer at another time.
Grading: 30% mid exam, 15% final exam, 15% class participation, 40% laboratory evaluation. We focus on participation in hands-on class exercises, completing online labs and quizzes, and exams.
This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
GEOG 1973 Geography of the Twin Cities
3 credit(s); Credit will not be granted if credit has been received for: GEO 1009;
Instructor: Martin, Judith A
Description: This course is a survey of the historical and contemporary geographical patterns of the Twin Cities metropolitan area. Questions raised include: Where are things located? (industry, transportation, housing, people of diverse backgrounds and resources, retail trade and services) Why are they located as they are? What are things like at the neighborhood level and how have these changed over time? How do economic and demographic forces produce changes on the landscape? How do publicly supported planning and redevelopment programs try to correct the consequences of past actions? Class format is lecture and discussion. Questions are encouraged. Visual materials (power-point, overhead transparencies, slides, and occasional videos) will be used extensively. Course materials are the same for GEOG 1973 and GEOG 3973, but those registered in 3973 are expected to perform at a much higher level of analysis, and this will be reflected in the point scale for assignments. Two large field studies make up the bulk of the work and most of the readings are on e-reserve.
Style: 75% Lecture, 10% Film/Video, 10% Discussion, 5% Small Group Activities.
Grading: 15% mid exam, 25% final exam, 60% reports/papers.

GEOG 3101 Geography of the United States and Canada
4 credit(s); Credit will not be granted if credit has been received for: GEOG 3102;
Instructor: Hart, John Fraser
Description: A visual tour of the continent, with ca. 80 slides in each lecture. Emphasis on the ways in which different groups of people have interacted with different physical environments to produce distinctive regions. Satisfies the Social Science Core and Cultural Diversity theme requirements. The instructor has a quirky sense of humor, and the lectures are interesting.
Style: 100% Lecture.
Grading: 60% mid exam, 30% final exam, 10% reports/papers.
Exam Format: Multiple choice based on maps

GEOG 3361W Geography and Public Policy
3 credit(s); Meets CLE req of Writing Intensive;
Instructor: Squires, Roderick H
Description: Individuals, corporations, and governments use the nation’s land surface, water, and air to produce goods (food products, houses, landmines, automobiles, software, and paperclips) and to provide services (education, freedom, health, and welfare). In doing so they construct the artifacts that we see and create the places that we recognize. Landscapes, assemblages of artifacts, and places represent the outcome of rational decisions made by individuals, corporations, and governments. These decisions are made, in part, against a backdrop of the incessant, and often acrimonious, national debate concerning the role and responsibility of the federal government. To understand the decisions, and thus truly appreciate landscapes and places, we must understand how the federal government operates, how individuals in the legislative, administrative, and judicial branches of the government reach consensus and compromise about social goals and appropriate individual, corporate, and governmental behavior, and so create incentives, and dis-incentives, for certain types of behavior. We will pay particular attention to some of the documents that are produced during the national debate, the outcome of which is usually termed ‘federal policy’. The course examines landscapes and places as political statements that reflect a past and a present and provide a basis for a future. Target audience, undergraduates in any major.
Style: 60% Lecture, 40% Laboratory.
Grading: 100% reports/papers.

GEOG 3376 Political Ecology of North America
3 credit(s); Meets CLE req of Environment;
Instructor: Braun, Bruce Philip
Description: This is an interdisciplinary course devoted to understanding the interconnections of society and environment in the North American context. In the class you will develop ways to think critically about how ecological relations are inextricably connected to social, cultural, political and economic processes, as well as with place, space and scale. You will learn to see human environments in terms of the biophysical processes that shape and sustain them, and physical environments in terms of the social, political, economic and legal practices that determine their material form. You will also learn how and why the environment has been politicized in the ways it has, and why environmental change occurs how and where it does in an age of neoliberal capitalism. The course is structured around a series of readings and case studies taken from different sites across North America, from New Orleans and Hurricane Katrina, to bioprospecting in Mexico, to conflicts over the forests of British Columbia. It will challenge you to develop a thorough understanding of the relation between capital, state and nature, to understand the different ways that environmental movements have emerged to contest and shape environmental change, and to critically examine the intersections of race, gender and environment in particular environmental conflicts. The course meets CLE requirements for both the Environment theme and the Citizenship and Public Ethics theme.
Style: 50% Lecture, 10% Film/Video, 20% Discussion, 10% Small Group Activities. 10% Field Trips.
Grading: 20% mid exam, 20% final exam, 45% reports/papers, 15% class participation.

GEOG 3381W Population in an Interacting World
4 credit(s); Meets CLE req of Global Perspectives; meets CLE req of Social Sciences; meets CLE req of Writing Intensive;
Instructor: Leitner, Helga
Description: The aim of this course is to provide students with a basic understanding of and appreciation for human population phenomena and problems in an increasingly interdependent world. This will involve an investigation of patterns and trends in fertility, mortality and migration of human populations in different parts of the world and an examination of how these are shaped by, and engender economic, political, cultural and environmental change. Throughout the course, particular attention is paid to: 1) contemporary population problems at the global, national and local scale, including the world population explosion, high levels of fertility in parts of the less developed world, record-low fertility and population ageing in industrialized countries, the HIV-AIDS pandemic and major world health problems, increasing levels of international migration, refugee crises, massive rural to urban migrations in the less developed world; 2) policies adopted to address these problems such as family planning policies to reduce fertility levels and migration policies; and 3) the gender dimension of contemporary population problems and policies, including women's reproductive health and rights. In addition, this course will introduce students to various population theories, basic sources and measures for the study of population dynamics, and allow them to gain basic skills and experience in data analysis, interpretation, writing research reports and oral presentations.

GEOG 3521 Digital Planet: Understanding Your World in the Information Age
3 credit(s);
Instructor: Harvey, Francis
Description: Student may contact the instructor or department for information.

GEOG 3839 Introduction to Dendrochronology
3 credit(s); prereq [1403, [BIOL 1001 or BIOL 1009 or equiv]] or instr consent;
Instructor: Kimmell, Kurt
For information.

GEOG 3973 Geography of the Twin Cities
3 credit(s); Credit will not be granted if credit has been received for: GEO 1009;
Instructor: Martin, Judith A
Description: This course is a survey of the historical and contemporary geographical patterns of the Twin Cities metropolitan area. Questions raised include: Where are things located? (industry, transportation, housing, people of diverse backgrounds and resources, retail trade and services) Why are they located as they are? What are things like at the neighborhood level and how have these changed over time? How do economic and demographic forces produce changes on the landscape? How do publicly sponsored planning and redevelopment programs try to correct the consequences of past actions? Class format is lecture and discussion. Questions are encouraged. Visual materials (power-point, overhead transparencies, slides, and occasional videos) will be used extensively. Course materials are the same for Geog 1973 and Geog 3973, but those registered in 3973 are expected to perform at a much higher level of analysis, and this will be reflected in the point scale for assignments. Two large field studies make up the bulk of the work and most of the readings are on E-reserve.
Style: 75% Lecture, 10% Film/Video, 10% Discussion, 5% Small Group Activities.
Grading: 15% mid exam, 25% final exam, 60% reports/papers.

GEOG 4001 Modes of Geographic Inquiry
4 credit(s);
Instructor: Henderson, George Lawlor
Description: This is an exciting “ways of knowing” course, applicable to Geography but also to the social sciences, sciences, and humanities more generally. In the course we explore why the geographical interrelatedness of phenomena (e.g. places, people, social, economic, and natural processes) means we need to understand those phenomena from an integrated perspective. We will see, however, that this is not enough: We need to understand that there are profoundly different ways of achieving integrated understandings and that every “integrated” understanding has its blindspots. To do this work we will focus on the topic of “Oil” as an especially important intersection of geography, geology, human history, politics, and more.
Style: 50% Lecture, 50% Discussion.
Grading: 30% mid exam, 30% final exam, 30% reports/papers, 10% class participation.
Exam Format: Combined short answer and essay format

GEOG 5361 Geography and Real Estate
4 credit(s);
Instructor: Squires, Roderick H
Description: Through lectures and field trips the course will examine the nature and history of land ownership in the United States with special reference to Minnesota. The focus will be on the mechanistic, legalistic, and historic characteristics of land ownership not the uses to which land has been put or the philosophical, sociological, or economic aspects of land ownership. More attention will be paid to the published and unpublished primary materials that characterizes the nature of land ownership in the United States than to the secondary literature. The course is designed for relatively senior undergraduates, both majors and non-majors, and graduates, anyone interested in understanding the role that land ownership plays in our modern society and has played in our nation’s history.
Style: 50% Lecture, field trips
Grading: 100% reports/papers.
Exam Format: no exam

GEOG 5562 Geographic Information Science and Analytical Cartography
3 credit(s); prereq GIS 5571 or instr consent;
Instructor: Lindberg, Mark B
Description: Students may contact the instructor or department for information.

GEOG 8001 Problems in Geographic Thought
A-F only, 3 credit(s);
Instructor: Klink, Katherine
Description: Student may contact the instructor or department for information.

GEOG 8260 Seminar: Physical Geography
3 credit(s); prereq instr consent;
Instructor: Kipfmueller, Kurt
Description: Student may contact the instructor or department for information.

GEOG 8281 Seminar in GIS, Technology, and Society
3 credit(s); prereq instr consent;
Instructor: Harvey, Francis
Description: Ethical questions related to the use of GIS have been an area of importance for many years. The use of GIS for military and surveillance purposes along with concerns about the impacts GIS has on NGOs and the environment have been challenging issues and remain topics of deep concerning for people. Professionals working with GIS should develop a sound grasp of these issues and a thorough comprehension of the multiple concerns impacting the use and development of GIS. While most people agree that ethics matters, we often have great trouble putting ethical issues into action in practice. This seminar sets out to bridge this gap and provide a sound basis for future ethical consideration of accuracy and responsibility issues. This seminar, as part of a project supported by the National Science Foundation (NSF) and in collaboration with courses at Oregon State University and Pennsylvania State University engages students with a pragmatic approach to examining GIS ethics within the context of GIS professional work. It draws on the work of applied ethicists to approach questions of GIS ethics. This will be done through readings and a series of interviews with GIS professionals from the Twin Cities area. The first part of the course consists of a review of relevant applied ethical concepts. This forms the foundation for interviews with area GIS specialists. The interviews are followed by a review of relevant GIS ethical issues and codes of ethics before concluding with presentation and a concluding discussion about the role of ethics for GIS accuracy concerns and matters of responsibility.
Style: 90% Discussion, 10% Interviews with GIS Professionals
Grading: 25% reports/papers, 50% special projects, 25% class participation.

GEOG 8405 Seminar: Graduate Student Professional Development
S-N only, 1 credit(s), max credits 2; prereq Geography grad student;
Instructor: Klink, Katherine
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s); max credits 10; prereq dept consent;
Instructor: Martin, Judith A
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s); max credits 10; prereq dept consent;
Instructor: Lindberg, Mark B
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s); max credits 10; prereq dept consent;
Instructor: Letther, Helga
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s); max credits 10; prereq dept consent;
Instructor: McMaster, Robert B
Description: Student may contact the instructor or department for information.
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Hart, John Fraser
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Samatar, Abdi Ismail
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Squires, Roderick H
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Sheppard, Eric
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Klink, Katherine
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Gidwani, Vinay Krishin
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: McMaster, Susanna Akiko
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Harvey, Francis
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Henderson, George Lawlor
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Manson, Steven M.
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Kipfmueller, Kurt
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Saldanha, Arun
Description: Student may contact the instructor or department for information.

GEOG 8970 Directed Readings
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Kayzar, Brenda
Description: Student may contact the instructor or department for information.

GEOG 8980 Topics in Geography
1-3 credit(s), max credits 15, 10 completions allowed; prereq instr consent; Instructor: Lelitner, Helga
Description: Student may contact the instructor or department for information.

GEOG 8990 Topics in Geography
1-3 credit(s), max credits 15, 10 completions allowed; prereq instr consent; Instructor: Braun, Bruce Philip
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Adams, John S
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Martin, Judith A
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Lindberg, Mark B
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Lelitner, Helga
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent; Instructor: McAleer, Robert B
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Hart, John Fraser
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Gersmehl, Philip J
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent; Instructor: Brown, Dwight A
Description: Student may contact the instructor or department for information.
GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: Samatar, Abdil Ismail
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: Klink, Katherine
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: Weil, Connie
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: Sheppard, Eric
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: Squires, Roderick H
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: Skaggs, Richard H
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: Braun, Bruce Philip
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: Gidwani, Vinay Krishin
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: McMaster, Susanna Akiko
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: Harvey, Francis
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: Henderson, George Lawlor
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: Manson, Steven M.
Description: Student may contact the instructor or department for information.

GEOG 8990 Research Problems in Geography
1-5 credit(s), max credits 10; prereq dept consent ;
Instructor: Shuman, Bryan Nolan
Description: Student may contact the instructor or department for information.

Geological Engineering
122 Civil & Mineral Engineering

GEOE 3301 Soil Mechanics I
A-F only, 3 credit(s); prereq AEM 3031, CSE student;
Instructor: Detournay, Emmanuel Michel
Description: Student may contact the instructor or department for information.

GEOE 3301 Soil Mechanics I
A-F only, 3 credit(s); prereq AEM 3031, CSE student;
Instructor: Detournay, Emmanuel Michel
Description: Student may contact the instructor or department for information.

GEOE 4102W Capstone Design
A-F only, 4 credit(s); prereq CE 4301, CE 4401, CE 4501, CE 4502; Meets CLE req of Writing Intensive;
Instructor: Eickenberg, Paul Thomas
Description: Teams of 3 - 5 students solve civil engineering problems posed by practicing engineers (mentors). Student work progresses from problem description and formulation of objectives, through conceptual solutions, preliminary planning and analysis, design and environmental impact assessment, to feasibility plans and specifications, cost analysis, and recommendations. Each team makes three presentations. Draft reports and a final project report are reviewed.
Style: 5% Lecture, 10% Discussion, 50% Small Group Activities, 20% Student Presentation, 10% Demonstration, 5% Guest Speakers. Team work on an engineering project
Grading: 60% reports/papers, 5% attendance, 30% in-class presentation, 5% class participation.

GEOE 4102W Capstone Design
A-F only, 4 credit(s); prereq CE 4301, CE 4401, CE 4501, CE 4502; Meets CLE req of Writing Intensive;
Instructor: Lemer, Cherie M
Description: Teams of 3 - 5 students solve civil engineering problems posed by practicing engineers (mentors). Student work progresses from problem description and formulation of objectives, through conceptual solutions, preliminary planning and analysis, design and environmental impact assessment, to feasibility plans and specifications, cost analysis, and recommendations. Each team makes three presentations. Draft reports and a final project report are reviewed.
Style: 5% Lecture, 10% Discussion, 50% Small Group Activities, 20% Student Presentation, 10% Demonstration, 5% Guest Speakers. Team work on an engineering project
Grading: 60% reports/papers, 5% attendance, 30% in-class presentation, 5% class participation.
A-F only, 3 credit(s); prereq [[3301 or CE 3301], upper div CSE] or instr consent; Credit will not be granted if credit has been received for: CE 4301; Instructor: Gonella, Stefano
Description: Student may contact the instructor or department for information.

GEOE 8300 Seminar: Geomaterials
S-N only, 1-3 credit(s), max credits 4, 4 completions allowed; Credit will not be granted if credit has been received for: CE 8300; Instructor: Gonella, Stefano
Description: Student may contact the instructor or department for information.

GEOE 8351 Advanced Groundwater Mechanics I
A-F only, 3 credit(s); prereq CE 4351, CSE grad student or instr consent; Instructor: Strack PhD, Otto D
Description: Student may contact the instructor or department for information.

Geology and Geophysics
106 Pillsbury Hall

GEO 1001 Earth and Its Environments
4 credit(s); Credit will not be granted if credit has been received for: GEO 1101; Meets CLE req of Environment; meets CLE req of Physical Sciences; Instructor: Kleinspehn, Karen L
Description: Student may contact the instructor or department for information.

GEO 1007 From Microbes to Mammoths: History of Life on Earth
4 credit(s); Credit will not be granted if credit has been received for: GEO 1101; Meets CLE req of Environment; meets CLE req of Physical Sciences; Instructor: Teyssier, Christian
Description: INSTRUCTOR: Christian Teyssier
Email: teyssier@umn.edu
OFFICE HOURS: Thursdays, 11:15AM -12:05PM or by appointment; take advantage of Email to formulate your questions. I will also create a NING-like site so we can chat at pre-determined times. ALL QUESTIONS REGARDING THE LAB: Kent Kirkby, kirkby@umn.edu
Course description EARTH AND ITS ENVIRONMENTS is a course on our planet’s dynamic systems. These systems involve internal processes that control core and mantle convection and drive the motion of tectonic plates, creating the most spectacular mountains and canyons accompanied by dramatic seismic and volcanic activity. In addition, external processes control the evolution of glaciers, streams, groundwater, oceans, and atmospheric circulations. The new challenges in the Earth sciences are to understand the rock record in the context of these governing forces, and to resolve the spatial and temporal relationships between external and internal processes. We will also examine the records of global climate change and evaluate the impact of these changes on the environment and life on Earth: what do we know and/or speculate about our future and that of our planet? Course materials Lecture Text: Geology by Chernicoff and Whitney (4th Edition) Used and new copies are available at the bookstore in Coffman Union.
Style: 40% Lecture, 10% Film/Video, 20% Discussion, 30% Laboratory.
Grading: 65% quizzes, 35% laboratory evaluation.

GEO 1006 Oceanography
4 credit(s); Credit will not be granted if credit has been received for: GEO 5006; Meets CLE req of Environment; meets CLE req of Physical Sciences; Instructor: Seyfried Jr, William E
Description: Welcome to Oceanography! Although the oceans surround us, in many ways they remain more mysterious than the surface of the Moon. The world oceans include the deepest places and the largest mountains on earth, a dynamic and ever-changing pattern of waves, tides, and currents, and an array of unfamiliar creatures that live in a three-dimensional solution of life-sustaining chemical nutrients. In the short space of a semester, this course will try to provide at least a flavor of this complex and fascinating part of our world. We start with the nature of the ocean basins: their physical structure and evolution. We then examine the linkage between the evolution of the Earth and the formation of the oceans, and explore why and how seawater is what it is. Recently discovered spectacular geysers of hot seawater issuing from vents on the ocean floor, not only help to regulate seawater chemistry, but provide a unique environment for unusual microbial species, which serve as the base of the food chain for a diverse community of organisms. Next, we consider the dynamics of the great water masses, currents like the Gulf Stream, and the waves and tides that directly affect the lives of people on and near the sea. We then examine biological production and decomposition of organic matter and how they control nutrient distributions. The course ends with a look at how oceans and climate have evolved over time and where we may be headed in the future. Throughout the course, we emphasize ways in which the oceans directly affect humankind. Some examples include ocean-atmosphere interactions, which account for the El Niño phenomenon that has such a profound affect on global weather patterns and the human condition on Earth; tsunamis, which can influence people’s lives in virtually all coastal communities; coastal storms and the effects they produce; and the oceans and global warming. We also work on questions of marine policy, fishing, and marine mineral resources from the perspectives of human impacts.
Style: 55% Lecture, 40% Laboratory, 5% Small Group Activities.
Grading: 25% final exam, 42% quizzes, 33% laboratory evaluation.

GEO 1007 From Microbes to Mammoths: History of Life on Earth
4 credit(s); Meets CLE req of Biological Sciences; Instructor: Fox, David L
Description: GEO 1007 explores scientific evidence from biology, paleontology, and geology for the origin and subsequent evolution of life over the 4.5 billion year history of our planet. Earth appears to be unique in its habitability, and the origin of life on Earth was one of the most important events in our planet’s history. The ongoing evolution of life affects the composition of...
our atmosphere and ocean, changes the nature of geological processes such as weathering and sedimentation, and alters cycling of the major elements critical for living organisms. This course will introduce fundamental concepts in modern biology and geology, and consider the many interactions between biological and geological processes. The course will also cover important events and transitions in the history of life, such as the origin of life, the origin of multicellular organisms, the evolution of life on land, mass extinction events that nearly erased all life, and the evolution of dinosaurs, whales, and humans.

GEO 1012 Natural Hazards and Disasters
3 credit(s); Meets CLE req of Technology and Society;
Instructor: Kirkby,Kent Charles
Description: Student may contact the instructor or department for information.

GEO 1101 Introduction to Geology
3 credit(s); Credit will not be granted if credit has been received for: GEO 1001; Meets CLE req of Environment;
Instructor: Kleinspehn,Karen L
Description: Student may contact the instructor or department for information.

GEO 1101 Introduction to Geology
3 credit(s); Credit will not be granted if credit has been received for: GEO 1001; Meets CLE req of Environment;
Instructor: Kirkby,Kent Charles
Description: GEO 1101 is the lecture-only version of GEO 1001. Geology is the study of the Earth and its life. This is the world you live in and whether you're aware of them or not, geological processes have played an integral role in shaping our society and will affect your entire life. GEO 1101 is an introduction to physical geology, including the Earth's materials, dynamic processes, and evolution. Earth's physical and biological systems are intimately linked - human civilization being the most recent example. Human cultures are based on Earth resources and processes. Geological factors have played a pivotal role in our past and will largely determine our future. In turn, the human impact on earth systems is nearly unprecedented. In a relatively short period of time, humans have become one of the most potent geological forces. As human population and consumption continue to increase, it is critical that our society gains a better understanding of geological processes, in order to better manage our own future. GEO 1101 satisfies the Council on Liberal Education's requirements for the environmental theme. This course is designed for undergraduate students who are not geology majors and there are no prerequisites.

Style: 100% Lecture.
Grading: 100% quizzes.
Exam Format: Lecture quizzes are a mixture of multiple choice and short answer questions.

GEO 1101 Introduction to Geology
3 credit(s); Credit will not be granted if credit has been received for: GEO 1001; Meets CLE req of Environment;
Instructor: Teyssier,Christian
Description: INSTRUCTOR: Christian Teyssier Email: teyssier@umn.edu OFFICE HOURS: Thursdays, 11:15AM -12:05PM or by appointment; take advantage of Email to formulate your questions. I will also create a Ning-like site so we can chat at preferred times. ALL QUESTIONS REGARDING THE LAB: Kent Kirkby, kirkby@umn.edu Course description EARTH AND ITS ENVIRONMENTS is a course on our planet?'s dynamic systems. These systems involve internal processes that control core and mantle convection and drive the motion of tectonic plates, creating the most spectacular mountains and volcanic activity. In addition, external processes control the evolution of glaciers, streams, groundwater, oceans, and atmospheric circulations. The new challenges in the Earth sciences are to understand the rock record in the context of these governing forces, and to resolve the spatial and temporal relationships between external and internal processes. We will also examine the records of global climate change and evaluate the impact of these changes on the environment and life on Earth: what do we know and/or speculate about our future and that of our planet? Course materials Lecture Text: Geology by Cheminicoiff and Whitney (4th Edition) Used and new copies are available at the bookstore in Coffman Union.

Style: 40% Lecture, 10% Film/Video, 20% Discussion, 30% Laboratory.
Grading: 65% quizzes, 35% laboratory evaluation.

GEO 1102 Introduction to Earth History
3 credit(s); Credit will not be granted if credit has been received for: GEO 1002;
Instructor: Kirkby,Kent Charles
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Historical geology is the science that deals with the history of the Earth and its inhabitants. It draws on the principles of geology (the study of the Earth), biology (the study of life), and paleontology (the study of ancient life). Historical geologists are time travelers, and this course offers you the opportunity to take a voyage through time. You must use rocks, fossils, and a healthy dose of imagination in order to journey back to the age of dinosaurs, or of tribolites, or even before life itself. This course is divided into two distinct segments. The first, which comprises Lessons 1 and 2, is a broad overview of the basics of geology, biology, and paleontology that will become your foundation for understanding the later material. The second segment (Lessons 4 through 9) covers the story of Earth's history from its beginnings--nearly five billion years ago--to the present.

Style: Printed correspondence section
Grading: 25% mid exam, 35% final exam, 40% written homework.
Exam Format: Supervised, in-person exams

GEO 1106 Oceanography
3 credit(s); Credit will not be granted if credit has been received for: GEO 1006; Meets CLE req of Environment;
Instructor: Seyfried Jr,William E
Description: Welcome to Oceanography! Although the oceans surround us, in many ways they remain more mysterious than the surface of the Moon. The world oceans include the deepest places and the largest mountains on earth, a dynamic and ever-changing pattern of waves, tides, and currents, and an array of unfamiliar creatures that live in a three-dimensional solution of life-sustaining chemical nutrients. In the short space of a semester, this course will try to provide at least a flavor of this complex and fascinating part of our world. We start with the nature of the ocean basins: their physical structure and evolution. We then examine the linkage between the evolution of the Earth and the formation of the oceans, and explore why and how seawater is what it is. Recently discovered spectacular geysers of hot seawater issuing from vents on the ocean floor, not only help to regulate seawater chemistry, but provide a unique environment for unusual microbial species, which serve as the base of the food chain for a diverse community of organisms. Next, we consider the dynamics of the great water masses, currents like the Gulf Stream, and the waves and tides that directly affect the lives of people on and near the sea. We then examine biogeochemical production and burial of organic matter and how they control nutrient distributions. The course ends with a look at how oceans and climate have evolved over time and where we may be headed in the future. Throughout the course, we emphasize ways in which the oceans directly affect humankind. Some examples include ocean-atmosphere interactions, which account for the El Niño phenomenon that has such a profound affect on global weather patterns and the human condition on Earth; tsunamis, which can influence people?'s lives in virtually all coastal communities; coastal storms and the effects they produce; and the oceans and global warming. We also work on questions of marine policy, fishing, and marine mineral resources from the perspectives of human impacts.

Style: 95% Lecture, 5% Small Group Activities.
GEO 1901 Freshman Seminar: Environment
A-F only, 1-3 credit(s), max credits 6; prereq freshman;
Meets CLE req of Environment;
Instructor: Teyssier, Christian
Description: Student may contact the instructor or department for information.

GEO 1901 Freshman Seminar: Environment
A-F only, 1-3 credit(s), max credits 6; prereq freshman;
Meets CLE req of Environment;
Instructor: Thorliefson, Harvey
Description: Understanding interactions between the Minnesota environment, natural resources, ecosystems, and human activity requires a grasp of the structure and history of our landscape, from the Mississippi River basin to the Red River Valley and the Lake Superior basin. Underlying and shaping this landscape are ancient rocks in the north and in the deep subsurface, younger limestone and sandstone in the south, and the deposits of the Ice Age that our soils have formed in. These deposits host our principal drinking water sources, so we must understand them in order to protect and wisely use our water. Reading assignments will be papers, brochures, and web content. A full-day field trip on Saturday, September 18 will examine the water resources of our rivers and lakes, and a second full-day trip on Saturday, October 2 will examine how geology controls our well water supply.
Style: 40% Lecture, 30% Small Group Activities, 30% Field Trips.
Grading: 20% reports/papers, 20% special projects, 60% written homework.

GEO 1905 Freshman Seminar
A-F only, 1-3 credit(s), max credits 6; prereq freshman;
Instructor: Yuen, David A
Description: Students interested in working on a particular problem or issue in either geology or geophysics can contact the department office for referral to appropriate faculty members. Students will work on a one-to-one basis with a faculty member. Projects may include literature review, laboratory or field work, or computer modeling. Depending on the scope of the project students can earn from 1-4 credits for each project. This course may be taken more than once when different problems are pursued.

GEO 1905 Freshman Seminar
A-F only, 1-3 credit(s), max credits 6; prereq freshman;
Instructor: Yuen, David A
Description: Student may contact the instructor or department for information.

GEO 2201 Solid Earth Dynamics
A-F only, 4 credit(s); prereq Concurrent registration is required (or allowed) in PHYS 1301 or instr consent;
Instructor: Moskowitz, Bruce Matthew
Description: Student may contact the instructor or department for information.

GEO 2301 Mineralogy
3 credit(s); prereq concurrent enrollment in Chem 1021 and Math 1271 or instr consent;
Instructor: Feinberg, Joshua M.
Description: Student may contact the instructor or department for information.

GEO 3005 Earth Resources
3 credit(s);
Instructor: Alexander Jr, E Calvin
Description: Student may contact the instructor or department for information.

GEO 3093 Problems in Geology and Geophysics: Junior
1-4 credit(s), max credits 6, 6 completions allowed; prereq instr consent;
Instructor: STAFF
Description: Students interested in working on a particular problem or issue in either geology or geophysics can contact the department office for referral to appropriate faculty members. Students will work on a one-to-one basis with a faculty member. Projects may include literature review, laboratory or field work, or computer modeling. Depending on the scope of the project students can earn from 1-4 credits for each project. This course may be taken more than once when different problems are pursued.

GEO 3202 Fluid Earth Dynamics
4 credit(s); prereq Concurrent registration is required (or allowed) in 2201;
Instructor: Paola, Chris
Description: Student may contact the instructor or department for information.

GEO 3303W Geochemical Principles
4 credit(s); prereq Concurrent registration is required (or allowed) in Chem 1021 or instr consent; Meets CLE req of Writing Intensive;
Instructor: Edwards, Lawrence
Description: Student may contact the instructor or department for information.

GEO 4010 Undergraduate Seminar: Current Topics in Geology and Geophysics
1-4 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: STAFF
Description: Seminar courses are offered to undergraduate students on varying topics taught by departmental faculty. Students interested in learning which seminars are offered during a semester should contact either the department office or individual faculty members. Credit for seminar courses vary from 1-4 credits and this course may be taken more than once.
Style: varies with instructions
Grading: varies with instructions

GEO 4093 Problems in Geology and Geophysics: Senior
1-4 credit(s), max credits 6, 6 completions allowed; prereq instr consent;
Instructor: STAFF
Description: Students interested in working on a particular problem or issue in either geology or geophysics can contact the department office for referral to appropriate faculty members. Students will work on a one-to-one basis with a faculty member. Projects may include literature review, laboratory or field work, or computer modeling. Depending on the scope of the project students can earn from 1-4 credits for each project. This course may be taken more than once when different problems are pursued.

GEO 4094 Senior Thesis
2 credit(s), max credits 4; prereq Sr, Geo or GeoPhys major, instr consent;
Instructor: STAFF
Description: This course is intended for senior level majors to engage in independent research under faculty supervision. Students select problems according to individual interests and in consultation with faculty committee. Year long project results in a written thesis and oral defense.
Style: varies with instructions
Grading: varies with instructions

GEO 4203 Principles of Geophysical Exploration
3 credit(s); prereq Phys 1302;
Instructor: Moskowitz, Bruce Matthew
Description: This course deals with the applications of geophysical technique for subsurface exploration and characterization of mineral and energy resources, geotechnical, site investigation, and enviromental problems, and for global studies of the earth's interior. However, the main emphasis is on the shallow subsurface environment. Topics include potential field techniques (gravity and magnetics), seismic exploration (reflection and refraction), and electrical and electromagnetic methods. For each topic, the development will proceed from
basic principles through methodology to applications. Grading is based on a combination of problem sets, midterm exams, and a final exam. The course is designed for, but not limited to, undergraduate majors and graduate students in geology, geophysics, geological engineering and related fields.

**Style:** 100% Lecture.

**Grading:** 40% mid exam, 30% final exam, 30% problem solving.

**Exam Format:** mixed short answer, multiple choice, and simple problems

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**GEO 4203 Principles of Geophysical Exploration**

3 credit(s); prereq Phys 1302;

Instructor: Chandler, Val W

Description: This course deals with the applications of geophysical technique for subsurface exploration and characterization or mineral and energy resources, geotechnical, site investigation, and environmental problems, and for global studies of the earth's interior. However, the main emphasis is on the shallow subsurface environment. Topics include potential field techniques (gravity and magnetics), seismic exploration (reflection and refraction), and electrical and electromagnetic methods. For each topic, the development will proceed from basic principles through methodology to applications. Grading is based on a combination of problem sets, midterm exams, and a final exam. The course is designed for, but not limited to, undergraduate majors and graduate students in geology, geophysics, geological engineering and related fields.

**Style:** 100% Lecture.

**Grading:** 40% mid exam, 30% final exam, 30% problem solving.

**Exam Format:** mixed short answer, multiple choice, and simple problems

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**GEO 4211 Solid Earth Geophysics I**

A-F only, 3 credit(s); prereq 2201, Phys 1302;

Instructor: Revenaugh, Justin

Description: Student may contact the instructor or department for information.

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**GEO 4501 Structural Geology**

3 credit(s); prereq 2201, 2302;

Instructor: Hudleston, Peter John

Description: Structural geology is the study of the structures formed in rocks as a result of deformation, on all scales from the microscopic to the crustal or lithospheric (plates), and on time scales that vary from rapid associated with brittle behavior - to extremely slow associated with ductile flow. The most important forces applied to crustal rocks are gravitational and tectonic, and they result in rocks everywhere being in a state of stress. Analysis of structures starts with the concepts of stress and strain, with an emphasis on the large permanent strains commonly developed in nature. The course deals with the geological implications of strain theory and the geometry, kinematics and mechanical processes involved in the development of tectonic fabric and structures, moving from the brittle to the ductile regimes. Deformation mechanisms on the grain and microscopic scales are considered. Structures analyzed include joints, faults and folds.

**Grading:** 37% mid exam, 12% final exam, 10% reports/papers, 40% laboratory evaluation. 3 midterms plus lecture final for lecture part of course. 30% for lab work plus 10% for a lab final.

Field trip reports 10%.

**Exam Format:** Short essay answers, plus some problems involving numerical calculations.

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**GEO 4631W Earth Systems: Geosphere/Biosphere Interactions**

3 credit(s); prereq 3401; Meets CLE req of Writing Intensive;

Instructor: Ito, Emi

Description: Student may contact the instructor or department for information.

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**GEO 4703 Glacial Geology**

4 credit(s); prereq 1001 or 1004 or instr consent;

Instructor: Jennings, Carrie Ellen

Description: The course will cover Quaternary climate history; the various geologic records used to reconstruct the history of glaciation; formation and dynamics of glaciers and ice sheets; processes of glacial erosion and deposition; and the nature of glacial sediments and landforms. From this course we hope that you will gain a better understanding of the glacial sediments and landforms of Minnesota and the Upper Midwest, an appreciation for the world-wide causes and effects of glaciation, and a better perspective of today's climate in relation to earth's climate history.

**Style:** 40% Lecture, 40% Discussion. Overnight field trips

**Grading:** 25% mid exam, 25% final exam, 25% quizzes, 25% other evaluation. Lab and field trip write ups

**Exam Format:** Short essay

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**GEO 4703 Glacial Geology**

4 credit(s); prereq 1001 or 1004 or instr consent;

Instructor: Jennings, Carrie Ellen

Description: Student may contact the instructor or department for information.

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**GEO 5205 Fluid Mechanics in Earth and Environmental Sciences**

3 credit(s); prereq MATH 2263 or instr consent;

Instructor: Saar, Martin O.

Description: This introductory course to fluid mechanics covers the physics of fluid flow in geological, geophysical, and environmental processes. We will derive and apply the governing flow equations from conservation of mass, energy, and momentum. These equations describe flow in many Earth and Environmental Science processes including fluid flow in oceans, lakes, rivers, and the atmosphere; flow of the Earth's mantle or outer core; wave propagation; porous medium flow in soils and fractures; and diffusive, advective, and dispersive transfer of heat and certain tracers, chemicals, contaminants, and microbes within subsurface fluids. However, exact solutions can often only be found for a few special cases. Thus, justified assumptions must often be made to solve real problems. Hence, the course will emphasize 1) critical analysis of assumptions that enter derivations or modifications of equations, 2) dimensional analysis and similitude, and 3) solving of specific problems in the Earth and Environmental Sciences. Other topics may include fluid rheology, convection, turbulent flow, porous flow, and poroelasticity.

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**GEO 5353 Electron Microprobe Theory and Practice**

3 credit(s); prereq [One yr chem, one yr physics] or instr consent; Credit will not be granted if credit has been received for: MATS 5353;

Instructor: Frahm, Ellery Edward

Description: Please visit the course webpage for additional information. This course aims to familiarize graduate students and advanced undergraduates with the physics behind and instrumentation of electron microprobe analysis and to train students to use the JEOL 8900 Electron Probe Microanalyzer. There are two components to this course: lectures and labs. All students attend all lectures and labs. This course is not mathematically based. Instead, the lectures and readings are intended to develop a conceptual and qualitative or semi-quantitative understanding of the principles and instrumentation of electron microprobe analysis. Concepts are emphasized so that, if and when one is interested in the mathematical details, one can have a firm foundation on which to build. There will be no weekly problem sets; however, all students are assigned 25 to 50 pages of reading each week, and there will be a quiz at the start of every lecture on the assigned readings. The prerequisites are one year of physics and/or chemistry or instructor consent. Coursework in geology is helpful but not required.

**Style:** 50% Lecture. 50% Laboratory.

**Grading:** 20% mid exam, 25% final exam, 10% special projects, 20% quizzes, 5% class participation, 20% laboratory evaluation. Grading schemes differ for graduate and undergraduate students.

**Exam Format:** Multiple choice, short answer, essay, diagrams; few mathematical problems.

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**GEO 5601 Advanced Sedimentology**

4 credit(s); prereq 4602 or instr consent;

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This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
GER 7100 Oral Health Services for Older Adults Seminar 2 credit(s);
Instructor: Shuman, Stephen K
Description: Student may contact the instructor or department for information.

GER 7200 Advanced Clinical Geriatric Dentistry A-F only, 1-10 credit(s), max credits 10, 1 completion allowed;
Instructor: Shuman, Stephen K
Description: Student may contact the instructor or department for information.

GER 7210 Geriatric Hospital Dentistry 1-6 credit(s), max credits 6, 1 completion allowed;
Instructor: Ofstehage, John Charles
Description: Student may contact the instructor or department for information.

GER 1001 Beginning German 5 credit(s);
Instructor: Kleinspehn, Karen L
Description: This course explores sedimentary basins and their processes from the sub-microscopic to basin scale with a focus on the petrology of clastic and carbonate deposits, tectonic and paleoclimatic records, paleocurrent and provenance analysis, thermal histories, diagenetic effects on subsurface fluid flow, and volcanic sedimentation. An additional goal is to interpret and predict deposits including alluvial fans, marine/lacustine fan deltas, aeolian settings and tidal systems. Remaining lecture topics are open and will be based on the interests of the class registrants and might include glacial settings, fluvial systems, coasts, storms, tsunamis, turbidite fans, carbonate platforms, continental shelves, deep-sea trenches and/or abyssal plains. Lectures are supported by images of outcrops or modern deposits from multiple parts of the world. No textbook is assigned, but vigorous class discussion is based on in-class exercises and reading assignments from the current geoscience literature. Students write reviews of recently published journal articles and a 10-12 page paper and present their paper topic in an informal in-class poster session. This course is for graduate students and upper-level undergraduates who have completed Geo 4602, Sedimentology and Stratigraphy, or an equivalent course.
Style: 60% Lecture, 40% Discussion.
Grading: 40% reports/papers, 10% class participation, 40% other evaluation. Review of published papers
Exam Format: No exams

GER 1002 Beginning German 5 credit(s); prereq 1001;
Instructor: STAFF
Description: German 1002 is intended for students who have completed German 1001 or the equivalent. The course emphasizes four language skills: speaking, writing, listening, and reading. Homework assignments become the basis for student-to-student interaction, small group work and role-play in class. The text for the course, Wende, covers speaking and writing in daily contemporary issues and stresses reading and listening strategies useful in language learning. Along with this textbook we use a German cultural reader called Grenzverkehr and grammar reference materials. By the end of the course, students should be able to compare the German and American educational systems, and describe free-time activities and career choices. They will also have become familiar with various contemporary social issues in the German-speaking countries. Several class sessions will help familiarize students with computer and Internet resources. This course includes process writing assignments. First-year language courses involve extensive student interaction, partner activities, and group work. Expect an average of 1.5 hours of outside preparation for each class session hour.
Style: Mostly discussion and student involvement and interaction.
Grading: 10% final exam, 12% reports/papers, 4% special projects, 33% quizzes, 28% class participation, 13% other evaluation. reading/group work assignments and computer and audio lab
Exam Format: Online

GER 1003 Intermediate German 5 credit(s); prereq 1002 or Entrance Proficiency Test;
Instructor: STAFF
Description: Students in this course will be working with the course-packet Sprunge and the accompanying listening exercises on Sprunge-Online, short literary texts, a feature film, and online cultural exercises. Topics covered in this course will include free-time activities and travel, living situations, the German educational system, career decisions, and media and
such as the genre we now call &quot;film noir.&quot; They also made comedies and melodramas. The exile directors also made political films for the war effort against the Nazis in the 1940s. The legacy of their work in Hollywood lives on not just in contemporary American cinema but in the postwar European cinema, where filmmakers were strongly influenced by this trans-Atlantic legacy of hybrid genres, styles-and politics. We will study these international dynamics by viewing both German and American films by these directors, and by learning to analyze them both as cinematic works of art and as cultural texts within larger social and political contexts. The German films we watch will all have English subtitles or intertitles.

**Style:** 33% Lecture, 33% Discussion, 33% Small Group Activities. In-class analysis of specific sequences from the films--both in lecture/discussion and in small groups.

**Grading:** 25% final exam, 35% reports/papers, 20% class participation, 20% other evaluation. Informal film responses on WebCT.

**Exam Format:** Take-home essay exam (min. 5 pp.)

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**GER 1905 Freshman Seminar: The Secret Code of Acting**

**A-F only, 3 credit(s); max credits 6; prereq Fr; Instructor: Rothe Matthias**

**Description:** Student may contact the instructor or department for information.

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**GER 3011W Conversation and Composition**

**4 credit(s); prereq 1004; Meets CLE req of Writing Intensive; Instructor: STAFF**

**Description:** This course is designed to refine students’ oral and written expression and aid in the development of critical analysis skills. Contemporary readings introduce important communicative modes of language (description, narrative, debate, report, text analysis), while a grammar review supports works on finer grammar points. Multi-media materials (video clips, feature films, computer resources) will complement the other instructional materials. Graded work includes active class participation, essay writing and revision, individual and group oral presentations and projects, and informal writing assignments of varying lengths.

**Style:** 10% Lecture, 10% Film/Video, 30% Discussion, 35% Small Group Activities, 15% Student Presentation.

**Grading:** 30% reports/papers, 25% quizzes, 10% journal, 25% in-class presentation, 10% class participation.

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**GER 3104W Reading and Analysis of German Literature**

**4 credit(s); prereq 3011; Meets CLE req of Literature; Meets CLE req of Writing Intensive; Instructor: Morris.Leslie G**

**Description:** This course introduces students to selected masterpieces of German literature (prose, poetry, and drama) and to the basic skills of literary interpretation. As a Writing Intensive course, it will also train students to formulate interpretive arguments in logical, written form, supported by textual evidence. Strong emphasis is placed on class discussion, in which you are encouraged to respond critically and thoughtfully to the assigned texts. Readings have been chosen on the basis of their provocative content as well as their superb literary quality. Conducted in German.

**Style:** 20% Lecture, 80% Discussion.

**Exam Format:** Essay
Emphasis will be placed on the way in which present-day Germany views its medieval and early modern past, and the role of the Middle Ages, the Reformation, and the Thirty Years War in the creation of a German national identity. Topics to be discussed include myths about the origins of the Germans, the Germanic reshaping of the ancient Roman world, the role of the German Empire in the development of medieval Christianity, the social position of women in medieval and early modern times, medieval and early modern court culture, Reformation and Counter-Reformation debates, Baroque culture in the German Empire. Discussions will involve many types of cultural artifacts, e.g., literary, historical, religious, philosophical texts; paintings, engravings, architecture; medieval and early modern music. Authors to be discussed include Tacitus, Einhard, Hildegard von Bingen, Luther, Grimmelshausen, et al. English discussion sections; question-and-answer sessions in German.

GER 3520 Topics in Austrian and Central European Culture
3 credit(s); max credits 9, 3 completions allowed; prereq 3011;
Instructor: Morris, Leslie C
Description: Student may contact the instructor or department for information.

GER 3593 Directed Studies: German-Speaking Countries
4 credit(s); max credits 12, 3 completions allowed; prereq 3011, dept consent;
Instructor: STAFF
Description: Preparation for research abroad during semester before departure. Written and oral reports upon return.

GER 3601 German Medieval Literature
3 credit(s); prereq No knowledge of German required; Meets CLE req of Global Perspectives; meets CLE req of Literature;
Instructor: Firchow, Evelyn S
Description: Student may contact the instructor or department for information.

GER 3993 Directed Studies
1-4 credit(s), max credits 12, 12 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: STAFF
Description: Guided individual reading or study. The student approaches an appropriate professor with a topic of interest, and if the professor has time and is willing to guide the student, the student, along with the professor, fills out a form which is available in the department office (205 Folwell). On this form, they specify the topic, reading and study materials, and form of evaluation.

GER 4001 Beginning German
2 credit(s); prereq Grad student;
Instructor: STAFF
Description: German 1001 is intended for beginners and introduces students to the four language skills areas: speaking, writing, listening, and reading. Homework assignments become the basis for student-to-student interaction, small group work and role-play in class. The text for the course, Wende, covers speaking and writing in daily contemporary issues and stresses reading and listening strategies useful in language learning. Along with this textbook we use a German cultural reader called Oktoberfest, a mystery which takes place in Munich, and grammar reference materials. Students will also complete a variety of writing activities, including essays. First-year language courses involve extensive student interaction, partner activities, and group work. Expect an average of 1.5 hours of outside preparation for each class session hour.
Style: Mostly discussion and student involvement and interaction.
Grading: 10% final exam, 12% reports/papers, 4% special projects, 30% quizzes, 30% class participation, 14% other evaluation. reading/group work assignments and computer/audiolab
Exam Format: written.

GER 4002 Beginning German
2 credit(s); prereq Grad student;
Instructor: STAFF
Description: German 1002 is intended for students who have completed German 1001 or the equivalent. The course emphasizes four language skills: speaking, writing, listening, and reading. Homework assignments become the basis for student-to-student interaction, small group work and role-play in class. The text for the course, Wende, covers speaking and writing in daily contemporary issues and stresses reading and listening strategies useful in language learning. Along with this textbook we use a German cultural reader called Grenzverkehr and grammar reference materials. By the end of the course students should be able to compare the German and American educational systems, and describe free-time activities and career choices. They will also have become familiar with various contemporary social issues in the German-speaking countries. Several class sessions will help familiarize students with computer and Internet resources. This course includes process writing assignments. First-year language courses involve extensive student interaction, partner activities, and group work. Expect an average of 1.5 hours of outside preparation time for each class session hour.
Style: Mostly discussion and student involvement and interaction.
Grading: 10% final exam, 12% reports/papers, 4% special projects, 30% quizzes, 30% class participation, 14% other evaluation. reading/group work assignments and computer/audiolab
Exam Format: written.

GER 4003 Intermediate German
2 credit(s); prereq Grad student;
Instructor: STAFF
Description: Students in this course will be working with the course-packet Sprunge and the accompanying listening exercises on Sprunge-Online, short literary texts, a feature film, and online cultural exercises. Topics covered in this course will include free-time activities and travel, living situations, the German educational system, career decisions, and media and technology. The program has a communicative and functional orientation. German 1003 is designed to review basic German language structures and to help students extend their listening and speaking skills. Regular recycling of grammar and vocabulary encourages students to become more fluent in their use of language. Students participate regularly in conversational activities, small group work, role-plays, and internet research of cultural topics. Process-writing essays, presentations on cultural topics, and short interviews round out the course.

GER 4004 Intermediate German
2 credit(s); prereq Grad student;
Instructor: STAFF
Description: 1004 builds on the skills taught in 1003. Students use the course-packet Sprunge 1004 and listening exercises on Sprunge-Online, read short texts and a play, watch a feature film, and do online cultural exercises. Topics include Berlin, film, and issues of multiculturalism. German 1004 reviews German language structures and helps students expand their listening, speaking, reading and writing skills. Regular recycling of grammar and vocabulary encourages students to become more fluent in their use of language. Students participate regularly in conversational activities, small group work, role-plays, and internet research. Process-writing essays, presentations, and interviews round out the course. Course materials: Sprunge 1004, Durrenmatt's Die Physiker. (Oxford UP edition).

GER 5011 Advanced Conversation and Composition
3 credit(s); prereq 3011, [grad student or adv undergrad];
Instructor: Wakefield, Ray M
Description: Student may contact the instructor or department for information.

GER 5510 Topics in Contemporary German Culture
3 credit(s), max credits 9, 3 completions allowed; prereq 3011;
GER 5630 Topics in German Cinema
3 credit(s), max credits 9, 3 completions allowed; prereq
3xxx film course or instr consent;
Instructor: Hueser, Rembert
Description: The German TV crime series TATORT [?Scene of the Crime?] is one of a kind. As of today [April 8, 2008] 728 episodes of this 90-minute show have been broadcast on German television. The first episode, "Taxi to Leipzig," aired on Nov. 30, 1970. That is 39 years ago. (?ER? in comparison, ran for 14 seasons, 15 years, 331 shows.) New episodes are shown every month of October. It is the starting point of the CGES teaching and research collaboration, "National Branding in Contemporary European Cinema," between the Universities of Minnesota, Bremen and Frankfurt and will be co-taught by faculty from all three institutions. As part of the class, award-winning director Benjamin Heisengen will present his most recent film The Robber at the Walker Art Center on October 27th (co-presented by the Walker Art Center). Heisengen will also attend one of our class meetings on October 28th. Next year, a sequel to this course will be taught simultaneously as an interactive television class on the campuses of the UofMN, the University of Bremen, and the University of Frankfurt.

GER 8300 Topics in Literature and Cultural Theory: Novellen Redux
3 credit(s), max credits 9, 3 completions allowed;
Instructor: Joeres, Ruth-Ellen B
Description: This is not your typical course on the Faust theme in German literature! Our work together will proceed in three stages. (1) We will read Goethe's Faust -- Urfaust, Faust I, and Faust II -- and do so at a pace luxuriously slow enough to enable us to really read, digest, ponder, and experience the work. We will also attempt to do that "cold," independently of the authority of secondary and scholarly materials, but with a high degree of critical self-reflection, thus allowing ourselves the full freedom and the challenge of reading the canonical work of German literature from our distant, early-21st-century perspective. Is Faust truly still readable, and, if so, why might it still be considered "canonical"? From this we move to a scan of scholarly writings on Goethe's text that represent the broadest possible range of Faust readings, from historicist and "werk-immanent" glorifications to feminist, postmodernist, and cultural studies bashings. Our goal is to gain a sense of the scholarly traditions, approaches, baggage, blindspots, and inventive openings that have been offered by Germanistik and German Studies. How has Faust been read, by whom, why, and with what gain or obfuscation? Why were these readings compelling in their time? Are they still powerful, and, if so, why, and how? (3) This is where we become most experimental. Goethe's Faust lives in ways beyond the mere literary, and for this reason we want to open our view to all realms of German cultural and identity production, from politics to music and visual and electronic media -- wherever Goethe's Faust might be appropriated and used by inventive readers and practitioners. We will consider the 1932 celebration of the anniversary of Goethe's death, which gave rise to a "brown" (fascist) Faust; move to an exploration of the 1949 celebration of the anniversary of Goethe's birth, which produced compelling Goethes and competing Faust interpretations in West and East Germany; and discuss the contemporary "intellectual's crisis" articulated by Oskar Negt's Die Faust-Karriere. Most importantly, we end the course with the projects and investigations of seminar participants, who will have the opportunity to identify and to explore Faust appropriations in various arenas of German culture and politics. How has Faust been appropriated by cultural practitioners in Germany? What are its relevance and its legacy.
GER 8820 Seminar: Advanced Theory: Formation of Modern Ethics in Kant and Adam Smith
3 credit(s), max credits 9, 3 completions allowed;
Instructor: Rothe, Matthias
Description: Student may contact the instructor or department for information.

German, Scandinavian, and Dutch
192 Klaeber Court

GSD 3451V Honors Major Project Seminar
A-F only, 3 credit(s); prereq Honors student; Credit will not be granted if credit has been received for: GSD 3451W;
Meets CLE req of Writing Intensive;
Instructor: Houe, Poul
Description: GSD 3451 is a required course that provides guidance and feedback to students who write their major projects for the B.A. degrees in German and Scandinavian. The Major Project Seminar provides a framework to help students conceptualize, research and write their major projects. The project should demonstrate the student's ability to define a research problem, gather and analyze pertinent information, use secondary sources appropriately, present arguments and propose solutions in a clear and logical manner. Students will work with the help of the course instructors to develop and carry out their plans for research and writing. The course is designated as Writing Intensive; over the course of the semester the students will write and revise a substantial paper, normally 20-25 pages, double-spaced, usually written in English following standard scholarly format. Each student will also be assigned a second reader? from the faculty who can provide feedback on the student's project proposal, bibliography, and at least one draft of the project. GSD 3451W and 3451V meet together; 3451V is meant for honors students planning to graduate within Latin honors. Please note that the major project seminar is offered during only the fall semester.

GSD 3451W Major Project Seminar
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: GSD 3451V;
Meets CLE req of Writing Intensive;
Instructor: Houe, Poul
Description: GSD 3451 is a required course that provides guidance and feedback to students who write their major projects for the B.A. degrees in German and Scandinavian. The Major Project Seminar provides a framework to help students conceptualize, research and write their major projects. The project should demonstrate the student's ability to define a research problem, gather and analyze pertinent information, use secondary sources appropriately, present arguments and propose solutions in a clear and logical manner. Students will work with the help of the course instructors to develop and carry out their plans for research and writing. The course is designated as Writing Intensive; over the course of the semester the students will write and revise a substantial paper, normally 20-25 pages, double-spaced, usually written in English following standard scholarly format. Each student will also be assigned a second reader from the faculty who can provide feedback on the student's project proposal, bibliography, and at least one draft of the project. GSD 3451W and 3451V meet together; 3451V is meant for honors students planning to graduate within Latin honors. Please note that the major project seminar is offered during only the fall semester.

GSD 5103 Teaching of Germanic Languages
3 credit(s);
Instructor: Melin, Charlotte Ann
Description: This seminar is designed primarily for first-time graduate TAs in the department; the course is conducted in English. Its goal is to equip new instructors with practical and theoretical knowledge about language teaching. Instructors are encouraged to develop self-reflexive practices and to create teaching materials. Discussions cover such topics as the following: theories of language acquisition, the role of contextualization, approaches to helping learners develop language skill proficiency (reading, writing, listening, and speaking) as well as cultural understanding, technology resources, and assessment practices.

GSD 3451 Teaching of Germanic Languages
3 credit(s);
Instructor: Houe, Poul
Description: GSD 3451 is a required course that provides guidance and feedback to students who write their major projects for the B.A. degrees in German and Scandinavian. The Major Project Seminar provides a framework to help students conceptualize, research and write their major projects. The project should demonstrate the student's ability to define a research problem, gather and analyze pertinent information, use secondary sources appropriately, present arguments and propose solutions in a clear and logical manner. Students will work with the help of the course instructors to develop and carry out their plans for research and writing. The course is designated as Writing Intensive; over the course of the semester the students will write and revise a substantial paper, normally 20-25 pages, double-spaced, usually written in English following standard scholarly format. Each student will also be assigned a second reader from the faculty who can provide feedback on the student's project proposal, bibliography, and at least one draft of the project. GSD 3451W and 3451V meet together; 3451V is meant for honors students planning to graduate within Latin honors. Please note that the major project seminar is offered during only the fall semester.

GER 5100 Topics in Gerontology
0.5-4 credit(s), max credits 10, 10 completions allowed;
Instructor: Ratner, Edward
Description: Student may contact the instructor or department for information.

GER 5101 Seminal Milestones in the Biology of Aging
1 credit(s); prereq NIA training grant Functional Proteomics of Aging [grad student or postdoc fellow] or [biology research grad student, instr consent);
Instructor: Thompson PhD, LaDora V
Description: Student may contact the instructor or department for information.

GER 5103 Teaching of Germanic Languages
3 credit(s);
Instructor: Houe, Poul
Description: GSD 3451 is a required course that provides guidance and feedback to students who write their major projects for the B.A. degrees in German and Scandinavian. The Major Project Seminar provides a framework to help students conceptualize, research and write their major projects. The project should demonstrate the student's ability to define a research problem, gather and analyze pertinent information, use secondary sources appropriately, present arguments and propose solutions in a clear and logical manner. Students will work with the help of the course instructors to develop and carry out their plans for research and writing. The course is designated as Writing Intensive; over the course of the semester the students will write and revise a substantial paper, normally 20-25 pages, double-spaced, usually written in English following standard scholarly format. Each student will also be assigned a second reader from the faculty who can provide feedback on the student's project proposal, bibliography, and at least one draft of the project. GSD 3451W and 3451V meet together; 3451V is meant for honors students planning to graduate within Latin honors. Please note that the major project seminar is offered during only the fall semester.

GER 3451 Teaching of Germanic Languages
3 credit(s);
Instructor: Houe, Poul
Description: GSD 3451 is a required course that provides guidance and feedback to students who write their major projects for the B.A. degrees in German and Scandinavian. The Major Project Seminar provides a framework to help students conceptualize, research and write their major projects. The project should demonstrate the student's ability to define a research problem, gather and analyze pertinent information, use secondary sources appropriately, present arguments and propose solutions in a clear and logical manner. Students will work with the help of the course instructors to develop and carry out their plans for research and writing. The course is designated as Writing Intensive; over the course of the semester the students will write and revise a substantial paper, normally 20-25 pages, double-spaced, usually written in English following standard scholarly format. Each student will also be assigned a second reader from the faculty who can provide feedback on the student's project proposal, bibliography, and at least one draft of the project. GSD 3451W and 3451V meet together; 3451V is meant for honors students planning to graduate within Latin honors. Please note that the major project seminar is offered during only the fall semester.

GSD 3451W Major Project Seminar
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: GSD 3451V;
Meets CLE req of Writing Intensive;
Instructor: Houe, Poul
Description: GSD 3451 is a required course that provides guidance and feedback to students who write their major projects for the B.A. degrees in German and Scandinavian. The Major Project Seminar provides a framework to help students conceptualize, research and write their major projects. The project should demonstrate the student's ability to define a research problem, gather and analyze pertinent information, use secondary sources appropriately, present arguments and propose solutions in a clear and logical manner. Students will work with the help of the course instructors to develop and carry out their plans for research and writing. The course is designated as Writing Intensive; over the course of the semester the students will write and revise a substantial paper, normally 20-25 pages, double-spaced, usually written in English following standard scholarly format. Each student will also be assigned a second reader from the faculty who can provide feedback on the student's project proposal, bibliography, and at least one draft of the project. GSD 3451W and 3451V meet together; 3451V is meant for honors students planning to graduate within Latin honors. Please note that the major project seminar is offered during only the fall semester.

GSD 5103 Teaching of Germanic Languages
3 credit(s);
Instructor: Houe, Poul
Description: GSD 3451 is a required course that provides guidance and feedback to students who write their major projects for the B.A. degrees in German and Scandinavian. The Major Project Seminar provides a framework to help students conceptualize, research and write their major projects. The project should demonstrate the student's ability to define a research problem, gather and analyze pertinent information, use secondary sources appropriately, present arguments and propose solutions in a clear and logical manner. Students will work with the help of the course instructors to develop and carry out their plans for research and writing. The course is designated as Writing Intensive; over the course of the semester the students will write and revise a substantial paper, normally 20-25 pages, double-spaced, usually written in English following standard scholarly format. Each student will also be assigned a second reader from the faculty who can provide feedback on the student's project proposal, bibliography, and at least one draft of the project. GSD 3451W and 3451V meet together; 3451V is meant for honors students planning to graduate within Latin honors. Please note that the major project seminar is offered during only the fall semester.

GER 5105 Multidisciplinary Perspectives on Aging
3 credit(s);
Instructor: STAFF
Description: This course is designed to: develop an understanding of aging as a normal process; describe the biological, psychological, and sociological consequences of aging; identify major health theories and approaches that different disciplines contribute to the field of gerontology; describe selected successful and maladaptive responses of older adults to the development tasks, opportunities and crises that confront them; identify specific interventions and agencies that enhance the life of the older person; discuss the value of a multidisciplinary approach to the study of aging and to the provision of services to an aging clientele; and identify the student's own values and beliefs about the aging process and older adults. The class format includes lectures, guest speakers, discussions, and readings of current material relating to aging and older adults. Specific topics covered include: Sociological; Psychological Aspects of Aging; Theories of Aging; Death and Bereavement; Issues and Problems of Older Adults in America; Human Services and Their Delivery Systems (Health, Nutrition, Long-term Care, Education); Public Policy & Legislation; Environment and Housing; Retirement. The course is targeted to upper division undergraduates and graduate students.

Style: 80% Lecture, 20% Discussion.

GER 8020 Seminar in Gerontology
S-N only, 2 credit(s); prereq instr consent;
Instructor: Thompson PhD, LaDora V
Description: Student may contact the instructor or department for information.

Global Studies
214 Social Science

GLOS 1112 Globalization and Social Justice
A-F only, 3 credit(s);
Instructor: Skaria, Ajay
Description: What does globalization involve? It involves constantly changing flows of 'possessions', 'ideas' and 'humans and non-humans' in time and space. It also involves social arrangements such as nation-states, the UN, the World Trade Organization, the World Bank, the International Monetary Fund, and various non-governmental organizations and social movements that attempt to manage these flows. What are these flows? The flow of 'possessions' includes commodities, stocks & bonds, currencies, foreign investments, remittances, and technologies (including biogenetic and weapons technologies). Correspondingly, the flow of 'ideas' includes democracy, human rights, free market as well as fair trade doctrines, religious ideologies, and cultural forms (including music, arts, and TV/cinema). Finally, flows of humans and non-humans include human migrations, tourism, animal and plant movements, water, diseases and epidemics, greenhouse gases and toxic and non-toxic waste. These flows have dissimilar patterns and
unequal impacts on people around the world. Attempts to manage them are also unequal. This implies that in addition to the question 'What does globalization involve?' we need to ask a second and an important question - 'What is the justice of globalization?'. Using carefully selected readings and audio-visual media this course will tackle both questions in order to think the possibility of a better, more just world.

**Style:** 60% Lecture. 40% Discussion and Audio-visual media (film and documentary clips, audio clips).

**Grading:** 10% class participation, 40% short commentaries on course materials, 40% individual 2,500 word essay, 10% group presentation.

**Exam Format:** There are no exams.

GLOS 3144 Knowledge, Power, and the Politics of Representation in Global Studies

- **4 credit(s); prereq 6 cr in social sciences including [GEOG 1301 or HIST 1012 or HIST 1015 or HIST 1018 or HIST 1019 or POL 1025], global studies major; Credit will not be granted if credit has been received for:** GLOS 3144H;

- **Instructor:** McLean, Stuart J

- **Description:** Student may contact the instructor or department for information.

GLOS 3144H Honors: Knowledge, Power, and the Politics of Representation in Global Studies

- **A-F only, 4 credit(s); prereq 6 cr in social sciences [including GEOG 1301 or HIST 1012 or HIST 1015 or HIST 1018 or HIST 1019 or POL 1025], honors global studies major; Credit will not be granted if credit has been received for:** GLOS 3144;

- **Instructor:** McLean, Stuart J

- **Description:** Student may contact the instructor or department for information.

GLOS 3401 International Human Rights Law

- **A-F only, 3 credit(s); prereq [3101, 3144] or instr consent ;**

- **Instructor:** Frey, Barbara A

- **Description:** International Human Rights law is designed to introduce students to issues, procedures and advocacy strategies involved in the promotion and protection of human rights worldwide. The course encourages students to analyze case situations and to evaluate the most effective methods to prevent human rights violations. Because of the evolving nature of the laws and issues in this field, students can participate as strategists and investigators on human rights issues. The instructor, Barbara Frey, is a lawyer and human rights activist.

- **Style:** 50% Lecture, 25% Discussion. guest speaker, debates and other exercises.

- **Grading:** 25% mid exam, 40% final exam, 25% reports/papers, 10% class participation.

- **Exam Format:** Short answer and essay

GLOS 3415 Global Institutions of Power: World Bank, International Monetary Fund, and World Trade Organization

- **A-F only, 3 credit(s);**

- **Instructor:** Goldman, Michael R

- **Description:** This course introduces three of the world's most powerful global institutions -- the World Bank, International Monetary Fund, and World Trade Organization. Three dimensions will be emphasized: we will look behind their closed doors to understand their daily practices; we will learn about the political, economic, and cultural terrain in which they operate; and we will observe them in key sites in the global South and North. General course themes include the business and expertise of development, poverty and wealth generation, the ideas of free market and trade, the rise of a transnational professional class and networks, and transnational social activism and networks.

- **Style:** 50% Lecture, 30% Discussion. student debates and in-class presentations

- **Grading:** 70% reports/papers, 10% in-class presentation, 20% class participation.

GLOS 3701W Population in an Interacting World

- **4 credit(s); Meets CLE req of Social Perspectives; meets CLE req of Social Sciences; meets CLE req of Writing Intensive;**

- **Instructor:** Leitner, Helga

- **Description:** The aim of this course is to provide students with a basic understanding of and appreciation for human population phenomena and problems in an increasingly interdependent world. This will involve an investigation of patterns and trends in fertility, mortality and migration of human populations in different parts of the world and an examination of how these are both shaped by, and engender economic, political, cultural and environmental change. Throughout the course, particular attention is paid to: 1) contemporary population problems at the global, national and local scale, including the world population explosion, high levels of fertility in parts of the less developed world, record-low fertility and population ageing in industrialized countries, the HIV-AIDS pandemic and major world health problems, increasing levels of international migration, refugee crises, massive rural to urban migrations in the less developed world; 2) policies adopted to address these problems such as family planning policies to reduce fertility levels and migration policies; and 3) the gender dimension of contemporary population problems and policies, including women's reproductive health and rights. In addition, this course will introduce students to various population theories, basic sources and measures for the study of population dynamics, and allow them to gain basic skills and experience in data analysis, interpretation, writing research reports and oral presentations.

GLOS 3900 Topics in Global Studies

- **3 credit(s), max credits 15, 3 completions allowed;**

- **Instructor:** Brakke, Mary Patricia

- **Description:** Student may contact the instructor or department for information.

GLOS 3900 Topics in Global Studies

- **3 credit(s), max credits 15, 3 completions allowed;**

- **Instructor:** Sawhney, Simona

- **Description:** A thinking that we may characterize as "feminist" makes its appearance in various texts and discourses in twentieth century India. While some early twentieth century feminists were centrally concerned about their particular role in nation-building, contemporary feminists have questioned many of the premises of the postcolonial nation, including its understanding of kinship, sexuality, and community. This class will have three aims: first, to introduce students to twentieth century feminist writings in India, including essays, short stories, and legal/political arguments. Second, to put this work in the context of some of the pressing questions surrounding citizenship, sexuality, and religiosity, not only in South Asia but also in other parts of the world. And third-perhaps most important-to build a more nuanced and critical approach to gender itself, as it is articulated and acted in everyday life as well as in activist and theoretical discourse. Readings and films will focus on several issues including the state's responses to violence against women, debates concerning abortion, questions posed by the political emergence of a gay rights discourse, and the varied anxieties provoked by the commodification and sale of sexual pleasure. There are no prerequisites, but students should come to class with a willingness to read carefully, even when the materials are not immediately familiar; to engage with all texts in a generous manner; and to participate in class discussion. Class assignments will include a midterm exam, a final 10-15 page paper, weekly postings on a web "blackboard" and, depending on the size of the class, perhaps one in-class oral presentation.

GLOS 3993 Directed Study

- **1-5 credit(s), max credits 15, 3 completions allowed; prereq instr consent , dept consent , college consent ;**

- **Instructor:** STAFF

- **Description:** Student may contact the instructor or department for information.

GLOS 4221 Globalize This! Understanding Globalization Through Sociology

- **A-F only, 3 credit(s); Credit will not be granted if credit has been received for:** SOC 4321; Meets CLE req of Global
GLOS 4910 Topics in Global Studies

3 credit(s), max credits 9, 3 completions allowed;
Instructor: Aminzade, Ron R
Description: Student may contact the instructor or department for information.

GLOS 5403 Human Rights Advocacy

3 credit(s); prereq Grad student or instr consent;
Instructor: Frey, Barbara A
Description: This 3-credit seminar will study the histories, philosophies and activities of human rights activists and organizations. The course examines the theoretical basis of the human rights movement, the principles underlying key organizations in the human rights field, as well as their strategies, tactics and programs. The class provides an opportunity to put in perspective students' previous experiences as interns or staff with non-governmental organizations (NGOs) in the human rights field. The class will use case studies and other active methods to understand and to evaluate the work of human rights activists. Topics to be considered include fact-finding and documentation, campaigns on human rights issues, cultural relativism, economic rights, and corporate responsibility for human rights. Students will consider the basic organizational structure and fundraising needs of NGOs. Students will design and present a research project based on their selection of in-class topics. Readings include material on the history of NGOs, roots and development of the human rights movement, analysis of key NGOs, advocacy within international institutions, and reports and publications from NGOs working in the field.
Style: 15% Lecture, 75% Discussion. 10% Group Work
Grading: 20% reports/papers, 20% class participation. 30% professional presentation; 30% group project

GLOS 5993 Directed Studies

1-4 credit(s), max credits 12, 12 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

GLOS 5994 Directed Research

1-4 credit(s), max credits 12, 12 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: STAFF

GRAD 5102 Preparation for University Teaching for Nonnative English Speakers

S-N only, 2 credit(s); prereq [English Language Proficiency Rating of 4 or successful completion of Foundations course], current or anticipated TA assignment, instr consent;
Instructor: Beers, Barbara Lee
Description:

GRAD 5102 Preparation for University Teaching for Nonnative English Speakers

S-N only, 2 credit(s); prereq [English Language Proficiency Rating of 4 or successful completion of Foundations course], current or anticipated TA assignment, instr consent;
Instructor: Beers, Barbara Lee
Description:

GRAD 5102 Preparation for University Teaching for Nonnative English Speakers

S-N only, 2 credit(s); prereq [English Language Proficiency Rating of 4 or successful completion of Foundations course], current or anticipated TA assignment, instr consent;
Instructor: Stetsenko, Elena V.
Description:

GRAD 5102 Preparation for University Teaching for Nonnative English Speakers

S-N only, 2 credit(s); prereq [English Language Proficiency Rating of 4 or successful completion of Foundations course], current or anticipated TA assignment, instr consent;
Instructor: Stetsenko, Elena V.
Description:

GRAD 5105 Practicum in University Teaching for Nonnative English Speakers

S-N only, 2 credit(s); prereq [5102 or English Language Proficiency Rating of 2 or 3], [current or anticipated TA assignment];
Instructor: Meyers, Colleen Marie
Description: Student may contact the instructor or department for information.

GRAD 5105 Practicum in University Teaching for Nonnative English Speakers

S-N only, 2 credit(s); prereq [5102 or English Language Proficiency Rating of 2 or 3], [current or anticipated TA assignment];
Instructor: Meyers, Colleen Marie
Description: Student may contact the instructor or department for information.

GRAD 5105 Practicum in University Teaching for Nonnative English Speakers

S-N only, 2 credit(s); prereq [5102 or English Language Proficiency Rating of 2 or 3], [current or anticipated TA assignment];
Instructor: Meyers, Colleen Marie
Description: Student may contact the instructor or department for information.

GRAD 5105 Practicum in University Teaching for Nonnative English Speakers

S-N only, 2 credit(s); prereq [5102 or English Language Proficiency Rating of 2 or 3], [current or anticipated TA assignment];
Instructor: Rosen, Caroline Frances
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
GDES 1311 Foundations: Drawing and Design in Two and Three Dimensions
A-F only, 4 credit(s); prereq Apparel design or graphic design or interior design pre-major credit will not be granted if credit already received for: DHA 1311; Instructor: STAFF
Description: In this course the formal, perceptual, symbolic and technical aspects of visual communication will be introduced—with the emphasis on drawing. Design elements and principles will be applied within the context of observational drawing, as well as two- and three dimensional design. Design process and creative problem solving will be stressed. We will work in a variety of mediums -- charcoal, conte, white chalk, but the emphasis will be on gaining expertise with the pencil. Subject matter will range from the figure to two-dimensional abstraction projects. You will gain expertise in drawing technique, as well as in composition, visual unity and balance and in visual analysis of drawings.
Style: 20% Lecture, 20% Discussion, 60% studio work
Grading: 10% class participation, 90% other evaluation. visual assignments
Exam Format: Final presentation

GDES 1312 Foundations: The Graphic Studio
OPT No Aud, 3 credit(s); Instructor: STAFF
Exam Format: Final presentation
Grading: 10% class participation, 90% other evaluation. visual assignments

GDES 1315 Foundations: The Graphic Studio
A-F only, 4 credit(s); prereq Graphic design pre-major or instructor consent credit will not be granted if credit already received for: DHA 1315; Instructor: STAFF
Description: This class has a well-earned reputation as 'the toughest class you'll ever love.' Class time is spent with slide and lecture presentations, studio work, and group and individual critiques. Successful completion requires a significant commitment to time, energy, and resources (supplies run approximately $200.) The result? You will produce a portfolio that is a descriptive explanation and illustration of color and design theory, enhanced with your own creative projects: a physical product of impressive proportions. You will be proud of your work. Most importantly, you will see color where you didn't see it before and recognize the 'color magic' around you.
Style: 20% Lecture, critique; 60% studio work
Grading: 20% reports/papers, 80% other evaluation. studio designs and exercises

GDES 2196 Work Experience in Graphic Design
S-N only, 1-4 credit(s); max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instructor consent; Instructor: Hokanson, Brad
Description: Student may contact the instructor or department for information.
GDES 2196 Work Experience in Graphic Design
S-N only, 1-4 credit(s); max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent ; Instructor: Martinson,Barbara Elizabeth
Description: Student may contact the instructor or department for information.

GDES 2196 Work Experience in Graphic Design
S-N only, 1-4 credit(s); max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent ; Instructor: Waldron,Carol C
Description: Student may contact the instructor or department for information.

GDES 2196 Work Experience in Graphic Design
S-N only, 1-4 credit(s); max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent ; Instructor: McCarthy,Steven J
Description: Student may contact the instructor or department for information.

GDES 2196 Work Experience in Graphic Design
S-N only, 1-4 credit(s); max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent ; Instructor: Boyd Brent,James W
Description: Student may contact the instructor or department for information.

GDES 2196 Work Experience in Graphic Design
S-N only, 1-4 credit(s); max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent ; Instructor: Chu,Sauman
Description: Student may contact the instructor or department for information.

GDES 2196 Work Experience in Graphic Design
S-N only, 1-4 credit(s); max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent ; Instructor: McCarthy,Steven J
Description: Student may contact the instructor or department for information.

GDES 2345 Typography
A-F only, 3 credit(s); prereq [2345 or DHA 2345], graphic design major, pass portfolio review credit will not be granted if credit already received for: DHA 2351; Instructor: McCarthy,Steven J
Description: Student may contact the instructor or department for information.

GDES 2351 Graphic Design I: Text and Image
A-F only, 3 credit(s); prereq [2345 or DHA 2345], graphic design major, pass portfolio review credit will not be granted if credit already received for: DHA 2351; Instructor: McCarthy,Steven J
Description: Student may contact the instructor or department for information.

GDES 2331 Color and Form in Surface Design
A-F only, 3 credit(s); prereq [1311 or DHA 1311], [1312 or DHA 1312], [graphic design or apparel design or instr consent ] credit will not be granted if credit already received for: DHA 3312; Instructor: Waldron,Carol C
Description: Student may contact the instructor or department for information.

GDES 3312 Color and Form in Surface Design
A-F only, 3 credit(s); prereq [1311 or DHA 1311], [1312 or DHA 1312], [graphic design or apparel design or instr consent ] credit will not be granted if credit already received for: DHA 3312; Instructor: Boyd Brent,James W
Description: This course will explore use of color in surface design with particular emphasis on hands on screenprinting (screenprinting for designers) on paper. There will also be a monoprinting on paper and fabric, and a surface design on fabric component (dyeing, screenprinting).
Style: 5% Lecture, 20% Discussion, 60% Laboratory, 5% Field Trips. visual assignments both in- and out of class work
Grading: 5% mid exam, 10% class participation, 85% other evaluation. visual assignments and in-class work

GDES 3352 Graphic Design II: Identity and Symbols
A-F only, 3 credit(s); prereq [2345 or DHA 2351], pass portfolio review, graphic design major credit will not be granted if credit already received for: DHA 3352; Instructor: Chu, Sauman
Description: This course will build on previously learned graphic design principles including a continued investigation of typography and its application. Students will explore the representation of abstract ideas in the form of symbols for the purpose of building identity. The class will focus on the development of visual identity through a systems approach to design with application to various printed collateral. This course will prepare students to design a symbol, a logotype, stationary system, and collateral products, keeping the identity consistent and intact throughout the process. Students will apply gestalt design principles, figure-ground relationships, and contrast within the structure of the grid to aid organization from piece to piece and within the whole.
Style: 20% Lecture, 30% Discussion, 10% Student Presentation, 40% Studio.
Grading: 85% special projects, 5% written homework, 5% journal, 5% class participation.

GDES 4131W History of Graphic Design
A-F only, 4 credit(s); prereq Intro history or art history course credit will not be granted if credit already received for: DHA 4131W; Meets CLE req of Writing Intensive; Instructor: Martinson,Barbara Elizabeth
Description: This course is an overview of the history of visual communication with an emphasis on graphic design. We will explore the history of images and writing systems and develop a better understanding of human communication systems. What can we learn about history and different cultures through the letterforms and symbols that they used? How has visual communication contributed to the formation of the
knowledge-base of cultural groups? How do the formal qualities of these communications depict the values and zeitgeist of a time period? Using both primary and secondary sources we will explore these questions. The course format includes faculty and student led lecture and discussion sessions, writing and design work, and a few videos and games. Weekly small group sessions provide an active venue for exploring the ideas covered in lecture. Assignments include one group paper (2 pages), two individual papers (5 pages each), the design of a digital exhibition, and the design of a timeline. Midterm and final exams are included.

Style: 40% Lecture, 5% Film/Video, 30% Discussion, 10% Small Group Activities, 15% Student Presentation.
Grading: 10% mid exam, 10% final exam, 25% reports/papers, 40% special projects, 15% in-class presentation.
Exam Format: short answer, multiple choice, fill in blank, crossword puzzle, who am I? questions.

GDES 4160H Honors Capstone Project
A-F only, 2 credit(s), max credits 4; prereq Graphic design honors;
Instructor: Hokanson, Brad
Description: Student may contact the instructor or department for information.

GDES 4160H Honors Capstone Project
A-F only, 2 credit(s), max credits 4; prereq Graphic design honors;
Instructor: Jasper, Daniel
Description: Student may contact the instructor or department for information.

GDES 4160H Honors Capstone Project
A-F only, 2 credit(s), max credits 4; prereq Graphic design honors;
Instructor: McCarthy, Steven J
Description: Student may contact the instructor or department for information.

GDES 4160H Honors Capstone Project
A-F only, 2 credit(s), max credits 4; prereq Graphic design honors;
Instructor: Boyd Brent, James W
Description: Student may contact the instructor or department for information.

GDES 4160H Honors Capstone Project
A-F only, 2 credit(s), max credits 4; prereq Graphic design honors;
Instructor: Waldron, Carol C
Description: Student may contact the instructor or department for information.

GDES 4160H Honors Capstone Project
A-F only, 2 credit(s), max credits 4; prereq Graphic design honors;
Instructor: Chu, Sauman
Description: Student may contact the instructor or department for information.

GDES 4160H Honors Capstone Project
A-F only, 2 credit(s), max credits 4; prereq Graphic design honors;
Instructor: Waldron, Carol C
Description: Student may contact the instructor or department for information.

GDES 4193 Directed Study in Graphic Design
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;
Instructor: Waldron, Carol C
Description: Student may contact the instructor or department for information.

GDES 4193 Directed Study in Graphic Design
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;
Instructor: McCarthy, Steven J
Description: Student may contact the instructor or department for information.

GDES 4193 Directed Study in Graphic Design
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;
Instructor: Boyd Brent, James W
Description: Student may contact the instructor or department for information.

GDES 4193 Directed Study in Graphic Design
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;
Instructor: Waldron, Carol C
Description: Student may contact the instructor or department for information.

GDES 4193 Directed Study in Graphic Design
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;
Instructor: McCarthy, Steven J
Description: Student may contact the instructor or department for information.

GDES 4193 Directed Study in Graphic Design
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;
Instructor: Boyd Brent, James W
Description: Student may contact the instructor or department for information.

GDES 4193 Directed Study in Graphic Design
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;
Instructor: Waldron, Carol C
Description: Student may contact the instructor or department for information.

GDES 4195 Internship in Graphic Design
S-N only, 1-4 credit(s), max credits 4, 1 completion allowed; prerequisite Completion of at least one-half of professional sequence, plan submitted/approved in advance by [adviser, internship supervisor], written consent of faculty supervisor, instr consent [added to PS note field, course notes sequence nbr 3:] credit will not be granted if credit already received for: DHA 4196; Credit will not be granted if credit has been received for: ADES 4196;
Instructor: Hokanson, Brad
Description: Student may contact the instructor or department for information.

GDES 4195 Internship in Graphic Design
S-N only, 1-4 credit(s), max credits 4, 1 completion allowed; prerequisite Completion of at least one-half of professional sequence, plan submitted/approved in advance by [adviser, internship supervisor], written consent of faculty supervisor, instr consent [added to PS note field, course notes sequence nbr 3:] credit will not be granted if credit already received for: DHA 4196; Credit will not be granted if credit has been received for: ADES 4196;
Instructor: McCarthy, Steven J
Description: Student may contact the instructor or department for information.

GDES 4195 Internship in Graphic Design
S-N only, 1-4 credit(s), max credits 4, 1 completion allowed; prerequisite Completion of at least one-half of professional sequence, plan submitted/approved in advance by [adviser, internship supervisor], written consent of faculty supervisor, instr consent [added to PS note field, course notes sequence nbr 3:] credit will not be granted if credit already received for: DHA 4196; Credit will not be granted if credit has been received for: ADES 4196;
Instructor: Martinson, Barbara Elizabeth
Description: Student may contact the instructor or department for information.
Instructor: Waldron, Carol C  
Description: Student may contact the instructor or department for information.

GDES 4196 Internship in Graphic Design  
S-N only, 1-4 credits(s), max credits 4, 1 completion allowed; prereq Completion of at least one-half of professional sequence, plan submitted/approved in advance by [adviser, internship supervisor], written consent of faculty supervisor, instr consent [added to PS note field, course notes sequence nbr 3]; credit will not be granted if credit already received for: DHA 4196; Credit will not be granted if credit has been received for: ADES 4196;  
Instructor: Chu, Sauman  
Description: Student may contact the instructor or department for information.

GDES 4196 Internship in Graphic Design  
S-N only, 1-4 credits(s), max credits 4, 1 completion allowed; prereq Completion of at least one-half of professional sequence, plan submitted/approved in advance by [adviser, internship supervisor], written consent of faculty supervisor, instr consent [added to PS note field, course notes sequence nbr 3]; credit will not be granted if credit already received for: DHA 4196; Credit will not be granted if credit has been received for: ADES 4196;  
Instructor: Boyd, Brent James W  
Description: Student may contact the instructor or department for information.

GDES 4196 Internship in Graphic Design  
S-N only, 1-4 credits(s), max credits 4, 1 completion allowed; prereq Completion of at least one-half of professional sequence, plan submitted/approved in advance by [adviser, internship supervisor], written consent of faculty supervisor, instr consent [added to PS note field, course notes sequence nbr 3]; credit will not be granted if credit already received for: DHA 4196; Credit will not be granted if credit has been received for: ADES 4196;  
Instructor: McCarthy, Steven J  
Description: Student may contact the instructor or department for information.

GDES 4196 Internship in Graphic Design  
S-N only, 1-4 credits(s), max credits 4, 1 completion allowed; prereq Completion of at least one-half of professional sequence, plan submitted/approved in advance by [adviser, internship supervisor], written consent of faculty supervisor, instr consent [added to PS note field, course notes sequence nbr 3]; credit will not be granted if credit already received for: DHA 4196; Credit will not be granted if credit has been received for: ADES 4196;  
Instructor: Jasper, Daniel  
Description: Student may contact the instructor or department for information.

GDES 4345 Advanced Typography  
A-F only, 4 credits(s); prereq [2345 or DHA 2345, graphic design major] or design grad student or instr consent credit will not be granted if credit already received for: DHA 4345;  
Instructor: Waldron, Carol C  
Description: Advanced Typographic Design is the continued -- and deeper -- exploration of the expressive visual communication through letterforms and words. Both the fundamental legibility of the invisible art and overt expression through type will be addressed. Students will apply fundamentals of design and typography to simple and complex communication objectives, exploring the expressive potential of varied typographic treatments through contrast, manipulation, arrangement, and juxtaposition. There will be a brief foray into the design of letterforms. Various typographic movements will be studied from both formal and historic perspectives. An extended typographic project will be completed. This class is intended for advanced graphic design majors.  
Style: 10% Discussion. studio design projects and critique  
Grading: 100% other evaluation. studio design project and performance

GDES 4354 Graphic Design IV: Integrative Campaign  
A-F only, 4 credits(s); prereq [DHA 353 or DHA 3353], graphic design major credit will not be granted if credit already received for: DHA 4353;  
Instructor: STAFF  
Description: This course will focus on a multi-faceted designed communication campaign involving substantial investigation and conceptual application. The project undertaken will be, in large part, developed by the individual student as a result of his/her research and specific interests. The multi-faceted character of the project will support a unified theme/concept/idea for an identified client that is aimed effectively at a specific market or interest group. The completed project will demonstrate the student’s ability to maximally apply acquired knowledge, skill and understanding of design, including a high degree of thought and sophisticated creativity. The course will build on typographic, compositional and imaging skills that students have developed in earlier classes.  
Style: 30% Lecture, 30% Discussion. studio time  
Grading: 25% class participation, 75% other evaluation. design project

GDES 4365W Graphic Design Senior Seminar  
A-F only, 3 credits(s); prereq DHA or GDES 4354, graphic design major credit will not be granted if credit already received for: DHA 4365W; Meets CLE req of Writing Intensive;  
Instructor: McCarthy, Steven J  
Description: Student may contact the instructor or department for information.

GDES 5193 Directed Study in Graphic Design  
A-F only, 1-4 credits(s), max credits 8; prereq Jr or sr or grad student;  
Instructor: Hokanson, Brad  
Description: Student may contact the instructor or department for information.

GDES 5193 Directed Study in Graphic Design  
A-F only, 1-4 credits(s), max credits 8; prereq Jr or sr or grad student;  
Instructor: Martinson, Barbara Elizabeth  
Description: Student may contact the instructor or department for information.

GDES 5193 Directed Study in Graphic Design  
A-F only, 1-4 credits(s), max credits 8; prereq Jr or sr or grad student;  
Instructor: Waldron, Carol C  
Description: Student may contact the instructor or department for information.

GDES 5193 Directed Study in Graphic Design  
A-F only, 1-4 credits(s), max credits 8; prereq Jr or sr or grad student;  
Instructor: McCarthy, Steven J  
Description: Student may contact the instructor or department for information.

GDES 5193 Directed Study in Graphic Design  
A-F only, 1-4 credits(s), max credits 8; prereq Jr or sr or grad student;  
Instructor: Boyd, Brent James W  
Description: Student may contact the instructor or department for information.
GDES 5193 Directed Study in Graphic Design
A-F only, 1-4 credit(s), max credits 8; prereq Jr or sr or grad student;
Instructor: Jasper, Daniel
Description: Student may contact the instructor or department for information.

GDES 5383 Digital Illustration and Animation
A-F only, 3 credit(s); prereq [(4384 or DHA 4384 or 5341 or DHA 5341), [graphic design major or grad student], experience with computer illustration] or instr consent
credit will not be granted if credit already received for: DHA 5383;
Instructor: Chu, Sauman
Description: This is an advanced computer design class which focuses on the integration of design knowledge with Macintosh computer applications. With the support of their understanding of design principles and strategies, students obtain experience using software to create animations. Two programs are emphasized: After Effects and Macromedia Flash. Course goals include broadening students' experience of the applications of interactive software, enhancing the integration of design knowledge with the use of the computer as a medium, and producing sophisticated and professional animation designs. A co-operative learning environment is encouraged.
Style: 20% Discussion, 10% Student Presentation, 20% Demonstration, 50% Studio. Demonstration, studio work, and critique
Grading: 10% class participation, 80% other evaluation. Studio projects, participation

GDES 8192 Readings in Graphic Design
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: Hokanson, Brad
Description: Student may contact the instructor or department for information.

GDES 8192 Readings in Graphic Design
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: Martinson, Barbara Elizabeth
Description: Student may contact the instructor or department for information.

GDES 8192 Readings in Graphic Design
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: Waldron, Carol C
Description: Student may contact the instructor or department for information.

GDES 8192 Readings in Graphic Design
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: Chu, Sauman
Description: Student may contact the instructor or department for information.

GDES 8192 Readings in Graphic Design
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: Boyd Brent, James W
Description: Student may contact the instructor or department for information.

GDES 8192 Readings in Graphic Design
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: McCarthy, Steven J
Description: Student may contact the instructor or department for information.

GDES 8192 Readings in Graphic Design
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: Jasper, Daniel
Description: Student may contact the instructor or department for information.

GDES 8193 Directed Study
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: Hokanson, Brad
Description: Student may contact the instructor or department for information.

GDES 8193 Directed Study
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: Martinson, Barbara Elizabeth
Description: Student may contact the instructor or department for information.

GDES 8193 Directed Study
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: Waldron, Carol C
Description: Student may contact the instructor or department for information.

GDES 8193 Directed Study
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: Boyd Brent, James W
Description: Student may contact the instructor or department for information.

GDES 8193 Directed Study
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: McCarthy, Steven J
Description: Student may contact the instructor or department for information.

GDES 8193 Directed Study
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: Jasper, Daniel
Description: Student may contact the instructor or department for information.

GDES 8222 Plan B Master’s Project
S-N only, 3 credit(s); prereq [Design or DHA master’s student], instr consent;
Instructor: Hokanson, Brad
Description: Student may contact the instructor or department for information.

GDES 8222 Plan B Master’s Project
S-N only, 3 credit(s); prereq [Design or DHA master’s student], instr consent;
Instructor: Martinson, Barbara Elizabeth
Description: Student may contact the instructor or department for information.

GDES 8222 Plan B Master’s Project
S-N only, 3 credit(s); prereq [Design or DHA master’s student], instr consent;
Instructor: Waldron, Carol C
Description: Student may contact the instructor or department for information.

GDES 8222 Plan B Master’s Project
S-N only, 3 credit(s); prereq [Design or DHA master’s student], instr consent;
Instructor: Hokanson, Brad
Description: Student may contact the instructor or department for information.

GDES 8222 Plan B Master’s Project
S-N only, 3 credit(s); prereq [Design or DHA master’s student], instr consent;
Instructor: Martinson, Barbara Elizabeth
Description: Student may contact the instructor or department for information.

GDES 8222 Plan B Master’s Project
S-N only, 3 credit(s); prereq [Design or DHA master’s student], instr consent;
Instructor: Waldron, Carol C
Description: Student may contact the instructor or department for information.
GDES 8222 Plan B Master's Project
S-N only, 3 credit(s); prerequisite [Design or DHA master's student], instr consent; Instructor: Chu, Sauman
Description: Student may contact the instructor or department for information.

GDES 8990 MFA Creative Thesis
A-F only, 6 credit(s), maximum credits 12; prerequisite completed coursework requirements for MFA in DHA w/multimedia emphasis, instr consent credit will not be granted if credit already received for: DHA 8990; Instructor: McCarthy, Steven J
Description: Student may contact the instructor or department for information.

GDES 8990 MFA Creative Thesis
A-F only, 6 credit(s), maximum credits 12; prerequisite completed coursework requirements for MFA in DHA w/multimedia emphasis, instr consent credit will not be granted if credit already received for: DHA 8990; Instructor: Jasper, Daniel
Description: Student may contact the instructor or department for information.

GDES 8990 MFA Creative Thesis
A-F only, 6 credit(s), maximum credits 12; prerequisite completed coursework requirements for MFA in DHA w/multimedia emphasis, instr consent credit will not be granted if credit already received for: DHA 8990; Instructor: McCarthy, Steven J
Description: Student may contact the instructor or department for information.

GDES 8990 MFA Creative Thesis
A-F only, 6 credit(s), maximum credits 12; prerequisite completed coursework requirements for MFA in DHA w/multimedia emphasis, instr consent credit will not be granted if credit already received for: DHA 8990; Instructor: McCarthy, Steven J
Description: Student may contact the instructor or department for information.

Greek
245 Nicholson Hall

GRK 1001 Beginning Classical Greek I
5 credit(s);
Instructor: STAFF
Description: Poetry, history, religion, medicine, philosophy, drama, political science, biology, literary criticism, astronomy, rhetoric, mythology, geography... Whether you want to read Homer or Hippocrates, Aristotle or Aristophanes, Paul or Plato, Greek 1001-1002 is the place to start. In this class you will learn the elements of classical Attic Greek, the dialect spoken and written in Athens during the fifth and fourth centuries BC: a language of tragedy, comedy, oratory, history, and philosophy. With a knowledge of the basic grammar and vocabulary of Attic, you can later go on to read the epics of Homer, the letters of Paul, the comedies of Aristophanes, or whatever you'd like from texts spanning 1200 years of history. There are no prerequisites for this course, except for an interest in the ancient world.
Style: 50% Lecture. recitation
Exam Format: translation, grammatical analysis

GRK 3003 Intermediate Greek Prose
4 credit(s); prerequisite Grade of at least [C- or S] in [1002 or 5001] or prerequisite credit will not be granted if credit already received for: GRK 3113; Credit will not be granted if credit has been received for: GRK 5003; Instructor: STAFF
Description: An introduction to reading unadapted Greek prose from classical authors such as Plato, Lysias, and Xenophon. The course includes some grammar review but also considers the works we study in their historical context.
Exam Format: translation/comment

GRK 5003 Intermediate Greek Prose: Graduate Student Enrollment
3 credit(s); prerequisite Grade of at least [C- or S] in [1002 or 5001] or prerequisite credit will not be granted if credit already received for: Grk 3113; Credit will not be granted if credit has been received for: GRK 3003; Instructor: Smith, Stephen
Description: Student may contact the instructor or department for information.

GRK 5100 Advanced Reading
3 credit(s), maximum credits 18, 6 completions allowed; prerequisite [3004, at least two years of college level Greek] or prerequisite, grad student credit will not be granted if credit already received for: Grk 3113; Credit will not be granted if credit has been received for: GRK 3003; Instructor: Olson, S Douglas
Description: Student may contact the instructor or department for information.

GRK 8200 Readings in Greek Verse
3 credit(s), maximum credits 18, 6 completions allowed; prerequisite Advanced grad student;
Instructor: Krevans, Nita
Description: Student may contact the instructor or department for information.
GRK 8910 Seminar
3 credit(s), max credits 30, 10 completions allowed;
Instructor: Sellew, Philip
Description: Student may contact the instructor or department for information.

HINF 5430 Health Informatics I
A-F only, 4 credit(s);
Instructor: Gatewood PhD, Lael Cranmer
Description: A-F only, 4 credit(s);
Instructor: Gatewood PhD, Lael Cranmer
Description: This course serves as a good base for students interested in health informatics.

HINF 5436 Seminar
S-N only, 1 credit(s);
Instructor: Melton-Meaux, Genevieve B
Description: This course serves as a good base for students interested in health informatics.

HINF 5494 Topics in Health Informatics
1-6 credit(s), max credits 6, 1 completion allowed;
Instructor: Adam, Terrence Joseph
Description: This course serves as a good base for students interested in health informatics.

HINF 5496 Internship in Health Informatics
S-N only, 1-6 credit(s), max credits 18, 3 completions allowed;
Instructor: Connelly, Donald P
Description: This course serves as a good base for students interested in health informatics.

HINF 5499 Capstone Project for the Masters of Health Informatics
A-F only, 3 credit(s);
Instructor: Speedie, Stuart M
Description: This course serves as a good base for students interested in health informatics.

HINF 5501 US Health Care System: Information Challenges in Clinical Care
S-N only, 0-1 credit(s), max credits 1, 1 completion allowed;
Instructor: Adam, Terrence Joseph
Description: This course serves as a good base for students interested in health informatics.

HINF 5510 Applied Health Care Databases: Database Principles and Data Evaluation
A-F only, 3 credit(s);
Instructor: Pleczkiewicz PhD, David Sean
Description: This course serves as a good base for students interested in health informatics.

HINF 8446 Professional Studies in Health Informatics
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed;
Instructor: Gatewood PhD, Lael Cranmer
Description: This course serves as a good base for students interested in health informatics.

HSM 3521 Health Care Delivery Systems
A-F only, 3 credit(s);
Instructor: Riley, William J
Description: This course serves as a good base for students interested in health informatics.

HSM 4541 Health Care Finance
A-F only, 3 credit(s);
Instructor: Riley, William J
Description: This course serves as a good base for students interested in health informatics.

HSM 4561 Health Care Administration and Management
A-F only, 3 credit(s); prerequisite 45 cr;
Instructor: Henry, William Floyd
Description: This course serves as a good base for students interested in health informatics.

HSM 4568 Medical Management
A-F only, 3 credit(s);
Instructor: Speedie, Stuart M
Description: This course serves as a good base for students interested in health informatics.

Health Systems Management
20 Classroom Office Building

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
for subsequent work in biblical Hebrew. The difference between this course and Hebr 1104, Biblical Hebrew, is that this course has a spoken, conversation component and prepares students to read texts without the diacritic marks. (This reading skill is necessary for those interested in reading Hebrew journal articles and post-biblical Hebrew commentaries.) The pronunciation of Hebrew taught will be the same in both courses.

**HEBR 1101 Beginning Biblical Hebrew I**
5 credit(s); Credit will not be granted if credit has been received for: HEBR 4104;
**Instructor:** STAFF
**Description:** This five credit course, which is the first of a two semester series, provides a logical introduction to the language, grammar, and vocabulary of the Hebrew Bible/Old Testament. We work systematically through a standard textbook and begin to read actual samples of biblical texts. This course will benefit students interested in the language, religion, culture of ancient Israel and the ancient Near East. It will also permit students to read and understand the grammar of medieval and modern Hebrew, and provides the essential background for subsequent work in graduate school or seminary. Students will also learn ways to approach learning a classical language. Classes will include grammar exercises, translation, and oral drills. Required Texts Thomas O. Lambdin, Introduction to Biblical Hebrew (New York: Scribners, 1971). Gary A. Long, Grammatical Concepts 101 for Biblical Hebrew: Learning Biblical Hebrew Grammatical Concepts Through English Grammar (Peabody, MA: Hendrickson, 2002) Course Reader. WebCT will be used for class communication and to provide access to supplemental resources and links for the study of Biblical Hebrew.
**Style:** 70% Lecture, 30% Discussion.
**Grading:** 40% mid exam, 25% final exam, 20% reports/papers, 15% other evaluation. homework
**Exam Format:** grammar and translation exercises

**HEBR 3011 Intermediate Hebrew I**
5 credit(s); prereq Grade of at least [C- or S] in [1002 or 4002] or instr consent; Credit will not be granted if credit has been received for: HEBR 4011;
**Instructor:** Schneller,Renana Segal
**Description:** This course assumes Hebr 1001-2 or other equivalent language study. It leads to the satisfaction of the CLA Language Requirement in: 1) listening comprehension, 2) speaking, 3) reading, 4) writing. The course materials and activities are designed to help students gain the skills necessary in each of these areas. We recognize that you may well have forgotten some of the skills acquired and the "rust" will have to be removed. There is a rapid review of fundamentals followed by a selection of dialogues designed to serve as a bridge between 1st and 2nd year Hebrew. Simple selections from Modern Israeli prose, newspaper, and the arts from the transition to written Israeli Hebrew. T.V. news and films are added as your ability increases. Grammatical skills and writing will be honed through short compositions and a textbook manual. Text: "Hebrew from Scratch" part II
**Style:** 50% Lecture, 50% Discussion.
**Grading:** 20% mid exam, 25% final exam, 20% reports/papers, 25% quizzes, 10% class participation.
**Exam Format:** written and oral responses

**HEBR 3951W Major Project**
4 credit(s); prereq [Hebr major, three 3xxx Hebrew courses], instr consent, dept consent; Meets CLE req of Writing Intensive;
**Instructor:** STAFF
**Description:** Student may contact the instructor or department for information.

**HEBR 3980 Directed Instruction**
1-4 credit(s), max credits 4, 1 completion allowed; prereq college consent;
**Instructor:** STAFF
**Description:** Student may contact the instructor or department for information.

**HEBR 3993 Directed Studies**
1-4 credit(s), max credits 4, 1 completion allowed; prereq instr consent;
**Instructor:** Schneller,Renana Segal
**Description:** Student may contact the instructor or department for information.

**HEBR 4001 Beginning Hebrew I**
3 credit(s); prereq Grad student; Credit will not be granted if credit has been received for: HEBR 1001;
**Instructor:** Schneller,Renana Segal
**Description:** Modern Israeli Hebrew seeks to serve several kinds of students. Typically, students in this course present a wide variety of backgrounds and interests, which include Jewish, or Israeli cultural studies, archaeology, linguistics, travel or work in Israel, and biblical studies. This is a course for complete beginners. You will learn basic listening, speaking, reading and writing skills with stress on proficiency in communication. Cultural materials are incorporated. The course serves as a good base for subsequent work in biblical Hebrew. The difference between this course and Hebr 1104, Biblical Hebrew, is that this course has a spoken, conversation component and prepares students to read texts without the diacritic marks. (This reading skill is necessary for those interested in reading Hebrew journal articles and post-biblical Hebrew commentaries.) The pronunciation of Hebrew taught will be the same in both courses.

**HEBR 4011 Intermediate Hebrew I**
3 credit(s); prereq Grade of at least [C- or S] in [1002 or 4002] or instr consent; Credit will not be granted if credit has been received for: HEBR 3011;
**Instructor:** Schneller,Renana Segal
**Description:** Student may contact the instructor or department for information.

**HEBR 4104 Basics of Biblical Hebrew I**
3 credit(s); prereq grad student; Credit will not be granted if credit has been received for: HEBR 1101;
**Instructor:** STAFF
**Description:** This five credit course, which is the first of a two semester series, provides a logical introduction to the language, grammar, and vocabulary of the Hebrew Bible/Old Testament. We work systematically through a standard textbook and begin to read actual samples of biblical texts. This course will benefit students interested in the language, religion, culture of ancient Israel and the ancient Near East. It will also permit students to read and understand the grammar of medieval and modern Hebrew, and provides the essential background for subsequent work in graduate school or seminary. Students will also learn ways to approach learning a classical language. Classes will include grammar exercises, translation, and oral drills. Required Texts Thomas O. Lambdin, Introduction to Biblical Hebrew (New York: Scribners, 1971). Gary A. Long, Grammatical Concepts 101 for Biblical Hebrew: Learning Biblical Hebrew Grammatical Concepts Through English Grammar (Peabody, MA: Hendrickson, 2002) Course Reader. WebCT will be used for class communication and to provide access to supplemental resources and links for the study of Biblical Hebrew.
**Style:** 70% Lecture, 30% Discussion.
**Grading:** 50% Lecture, 50% Discussion, audio/video tapes, games, activities
**Exam Format:** 25% quizzes, 10% class participation, 20% mid exam, 25% final exam, 20% reports/papers, 20% quizzes, 10% class participation.
**Exam Format:** grammar and translation exercises

**HEBR 5992 Directed Readings**
**Instructor:** STAFF
**Description:** Student may contact the instructor or department for information.
HINDI 5993 Directed Readings
1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Sawhney, Simona
Description: Student may contact the instructor or department for information.

HIST 1000W Visions of the Past: Thematic Approaches to Understanding History
0 credit(s), max credits 8; prereq Fr or soph or fewer than 60 cr or 1000W and 3000W-level of the same sect/version of Hist 1000W/3000W shall be considered equiv; students may not register for Hist 3000W when the Hist 1000W version was successfully completed.; Meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;
Instructor: Maynes, Mary Jo
Description: HIST 1/3000W - Visions of the Past: The Family from 10,000 BCE to the Present. Since the beginning of human culture, the family has been a key site where world-historical processes have unfolded. Family life, in turn, has always been shaped by local and global historical dynamics. These two observations provide the starting point for this course. The course is organized around family dimensions of world history from pre-historic times to the present. We begin by examining the family as the site of emergence of the earliest human societies and evaluate evidence of family life and gender relations that challenge older notions of “Man the Hunter.” We then look at connections between the evolution of family relations and the development of complex societies, states, and organized religions, drawing on evidence from several regions of the ancient world such as Mesopotamia, South Asia, and Africa. We explore how family practices help to account for the historical fate of different world regions in the era of European colonization that began around 1500. We look at the roles played by gender and generational relations in particular modernizing revolutions ranging from the French Revolution to the May Fourth Movement of China. We examine how political conflicts over the family played into fascist and colonial regimes and the Cold War in the 20th century. We end by examining the role of families in today's global economies and cultures in the Global North and the Global South. Throughout the course we will discuss the historical role of beliefs about family as well as family practices, and also in the family metaphors that shape political community (for example, the Five Relationships of Confucianism, the connection between royal power and paternal power in early modern Europe, or modern nationalist appeals to blood ties as the basis of citizenship). We draw on a wide range of historical sources including archaeological evidence, fiction, art and oral history as well as legal codes, census records, and memoirs. In weekly labs that are part of the course, students will investigate and learn to interpret a wide range of sources from which family history is reconstructed. Lectures, labs, and assignments will show how family life, often thought of as a relatively unchanging realm of merely private and local interest, in fact has played and continues to play a major role in world history.
Style: 45% Lecture, 15% Discussion, 15% Laboratory, 10% Small Group Activities, 5% Student Presentation, 5% Field Trips, 5% Web Based.
Grading: 10% mid exam, 30% reports/papers, 5% special projects, 10% attendance, 15% reflection paper, 5% in-class presentation, 10% class participation, 15% laboratory evaluation. There will be a variety of forms of reports and papers: assignments include in-class or in-lab writing as well as writing done at home and brought to class and to the lab sections.
Exam Format: The mid-term exam will be a take-home. The final assignment is a paper not an exam.

HIST 1012W The Age of Global Contact
4 credit(s); prereq Fr or soph or [jr or sr], non-hist major; Meets CLE req of Global Perspectives; meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;
Instructor: Gabaccia, Donna R
Description: This class surveys world history from about 1500. Although we often assume that globalization is a new phenomenon made possible by jet planes and cell phones, in fact, the rise of global interaction has a history dating back at least to Columbus's voyage in 1492. We will examine the historical growth -- and decline -- of globalization by following the movements of people, goods, and ideas. The course is designed for majors and non-majors alike. It will introduce students to how historians understand the past and will teach important analytical skills. Writing will be emphasized in the discussion sections. The course fulfills lower-division writing intensive requirements.
Style: 75% Lecture, 25% Discussion.
Grading: 30% final exam, 10% quizzes, 50% written homework, 10% in-class presentation.
Exam Format: Essay
**HIST 1904 Freshman Seminar**  
A-F only, 3 credit(s); max credits 6; prereq freshman;  
Instructor: Cohen,Gary B.  
Description: Student may contact the instructor or department for information.  

**HIST 1905 Freshman Seminar**  
A-F only, 3 credit(s); prereq freshman;  
Instructor: McNamara,Patrick J  
Description: Student may contact the instructor or department for information.  

**HIST 1907W Freshman Seminar**  
A-F only, 3 credit(s); prereq freshman; Meets CLE req of Writing Intensive;  
Instructor: McNamara,Patrick J  
Description: Student may contact the instructor or department for information.  

**HIST 1908W Freshman Seminar**  
A-F only, 3 credit(s); prereq freshman; Meets CLE req of Writing Intensive;  
Instructor: Cohen,Gary B.  
Description: Student may contact the instructor or department for information.  

**HIST 1909W Freshman Seminar**  
A-F only, 3 credit(s), max credits 6; prereq freshman; Meets CLE req of Writing Intensive;  
Instructor: STAFF  
Description: Student may contact the instructor or department for information.  

**HIST 1910W Freshman Seminar**  
A-F only, 3 credit(s); prereq freshman; Meets CLE req of Writing Intensive;  
Instructor: Green,George David  
Description: Student may contact the instructor or department for information.  

**HIST 3000W Visions of the Past: Thematic Approaches to Understanding History**  
0 credit(s), max credits 8; prereq Jr or sr or at least 60 cr; Meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;  
Instructor: Maynes,Mary Jo  
Description: HIST 1/3000W - Visions of the Past: The Family from 10,000 BCE to the Present Since the beginning of human culture, the family has been a key site where world-historical processes have unfolded. Family life, in turn, has always been shaped by local and global historical dynamics. These two observations provide the starting point for this course. The course is organized around family dimensions of world history from "pre-historic" times to the present. We begin by examining the family as the site of emergence of the earliest human societies and evaluate evidence of family life and gender relations that challenge older notions of "Man the Hunter." We then look at connections between the evolution of family relations and the development of complex societies, states, and organized religions, drawing on evidence from several regions of the ancient world such as Mesopotamia, South Asia, and Africa. We explore how family practices help to account for the historical fate of different world regions in the era of European colonization that began around 1500. We look at the roles played by gender and generational relations in particular modernizing revolutions ranging from the French Revolution to the May Fourth Movement of China. We examine how political conflicts over the family played into fascist and colonial regimes and the Cold War in the 20th century. We end by examining the role of families in today's global economies and cultures in the Global North and the Global South. Throughout the course we will discuss the historical role of beliefs about family as well as family practices, and also in the family metaphors that shape political community (for example, the Five Relationships of Confucianism, the connection between royal power and paternal power in early modern Europe, or modern nationalist appeals to blood ties as the basis of citizenship). We draw on a wide range of historical sources including archaeological evidence, fiction, art and oral history as well as legal codes, census records, and memoirs. In weekly labs that are part of the course, students will investigate and learn to interpret a wide range of sources from which family history is reconstructed. Lectures, labs, and assignments will show how family life, often thought of as a relatively unchanging realm of merely private and local interest, in fact has played and continues to play a major role in world history.  
Style: 45% Lecture, 15% Discussion, 15% Laboratory, 10% Small Group Activities, 5% Student Presentation, 5% Field Trips, 5% Web Based.  
Grading: 10% mid exam, 30% reports/papers, 5% special projects, 10% attendance, 15% reflection paper, 5% in-class presentation, 10% class participation, 15% laboratory evaluation. There will be a variety of forms of reports and papers; assignments include in-class or in-lab writing as well as writing done at home and brought to class and to the lab sections.  
Exam Format: The mid-term exam will be a take-home. The final assignment is a research paper not an exam.  

**HIST 3010W Historical Research Seminar**  
A-F only, 3 credit(s), max credits 12, 4 completions allowed; prereq Students may not repeat for credit the same section (or topic); Meets CLE req of Writing Intensive;  
Instructor: Maynes,Mary Jo  
Description: Student may contact the instructor or department for information.  

**HIST 3010W Historical Research Seminar**  
A-F only, 3 credit(s), max credits 12, 4 completions allowed; prereq Students may not repeat for credit the same section (or topic); Meets CLE req of Writing Intensive;  
Instructor: Isaacman,Allen F  
Description: The years from 1975 to 2000 were a critical period in the history of Southern Africa. During this quarter of a century, colonialism and apartheid crumbled in the face of popular protest and armed struggle. Angola and Mozambique, former Portuguese colonies, became free in 1975. Five years later African nationalist gained control Zimbabwe ending almost a century of white settler rule. In 1994 the apartheid regime was toppled. This seminar explores the history of race, class and gender oppression in the colonial/ apartheid era and the struggle to dismantle these systems of oppression. It also explores the varied policies and practices of the liberation movements once these assumed power and asks what historical conditions helped to explain the progressive policies of the African National Congress in South Africa, for example, as opposed to the authoritarian regime of Robert Mugabe in Zimbabwe. Because the seminar focuses on the lived experiences of the oppressed we will critically access a number of oral histories, autobiographies, documentaries and publications from the liberation movements as well as more conventional historical sources. Given the interdisciplinary nature of this scholarship, this course will also address questions of evidence, mythology and epistemology in the writing of history as an academic discipline. Students will be asked to write short critical think papers and a research paper of about 20 pages.  

**HIST 3010W Historical Research Seminar**  
A-F only, 3 credit(s), max credits 12, 4 completions allowed; prereq Students may not repeat for credit the same section (or topic); Meets CLE req of Writing Intensive;  
Instructor: Lower,Michael T  
Description: Student may contact the instructor or department for information.  

**HIST 3052 Ancient Civilization: Greece**  
3 credit(s);  
Instructor: Evans,John Karl  
Description: For a syllabus, please visit www.tc.umn.edu/~evans002/.  
Style: 100% Lecture.  
Grading: 33% mid exam, 67% final exam.  
Exam Format: take-home essay  

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
HIST 3101 Introduction to Medieval History
3 credit(s); Meets CLE req of Global Perspectives; meets CLE req of Historical Perspectives;
Instructor: Kamens, Bernard S
Description: This lecture course begins with the Decline and Fall of the Roman Empire and covers such topics as the development of Christianity, the Muslim invasions, the Merovingians, the Carolingian empire, the Crusades, the making of England and France, the German Empire, the Spanish Reconquista, the Hundred Years War, and the Black Death. It ends with the Renaissance. Political and Religious history is the major focus of this course.
Style: 75% Lecture, 25% Discussion.
Grading: 25% mid exam, 45% final exam, 30% reports/papers. Study lists will be distributed prior to exams.
Exam Format: Identifications essays and longer essays.

HIST 3151W British History to the 17th Century
4 credit(s); Meets CLE req of Global Perspectives; meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;
Instructor: Norling, Lisa A
Description: Pre-modern Britain contributed much to the English-speaking world: language, law, representative institutions, folktales, family and household structures, and much more. But these cultural developments were not uncontested in their own time. The "Britain" of later centuries, whose empire made such an impact on the entire world, grew out of a complex mixture of cultures: Celtic, Roman, Christian, Anglo-Saxon, Viking, Norman. In tracing the British Isles from prehistoric times until the mid-seventeenth century, this class focuses on cultural interactions and the development of complex identities. Topics include the Roman, Anglo-Saxon, and Norman conquests of England and the English conquests of Wales and Ireland; forms of Christianity (both official and popular) as it varied across Britain and Ireland, and over time with the initial conversion, relation between church and society in the Middle Ages, and the relation between politics and belief in the Protestant Reformation; forms of governance from the level of the village to that of the kingdom; social structures, rural life, and urbanization; family and gender relations; daily life; high and low culture; beginnings of overseas expansion. Textbook, primary source readings, 2 exams, 2 papers with required drafts.
Exam Format: i.d. terms and short essays.

HIST 3347 Women in Early and Victorian America: 1600-1890
3 credit(s); Credit will not be granted if credit has been received for: GWSS 3407; Meets CLE req of Diversity and Soc Justice US; meets CLE req of Historical Perspectives;
Instructor: Karras, Ruth Mazo
Description: Women of Early American women -- and the men in their lives, too -- and the powerful dynamics of gender and race in American history, 1600-1880. For any student; no background knowledge necessary. Topics include women's involvement in -- and the impact on women of -- European colonization in the Americas and the dispossession of native peoples, slavery, Revolution and nation-building, social reform, economic and technological change, westward expansion and Civil War, and transformations in politics and law, education, family life, gender roles, and sexuality. Course organized primarily as lecture with occasional films, large-group student discussion, in-class exercises. Average of 60-80 pages of reading per week, three short take-home essays, two exams.
Style: 80% Lecture, 20% Discussion.
Grading: 15% mid exam, 25% final exam, 50% reports/papers, 15% quizzes.
Exam Format: short identification, essay.

HIST 3401W Early Latin America to 1825
A-F only, 4 credit(s); Credit will not be granted if credit has been received for: LAS 3401W; Meets CLE req of Global Perspectives; meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;
Instructor: Chambers, Sarah C
Description: In 1519, Spaniard Hernan Cortes entered the dazzling capital city of the Mexica (Aztec) empire; what happened next depends upon whose versions of events you read. European accounts emphasize his daring capture of emperor Moctezuma and his rapid domination of central Mexico by the use of his wits and superior technology. Native accounts reveal that the capture of Moctezuma backfired, leading to a lengthy and heroic defense of the island city. Regardless of the telling, such encounters and struggles set the stage for European rule of the Americas for the next three centuries. This course begins with pre-contact Native American societies, but primarily explores the historical processes of colonialism in Latin America (especially Mexico, Brazil and Peru) between 1492 and 1825. We will study both the economic, religious, and administrative systems put in place by the Europeans, and the varied responses of indigenous peasants, African slaves, racially-mixed town dwellers, and women. We will learn to analyze primary documents from the period (such as the competing accounts of the conquest of Mexico) and read life stories as well as historical narratives. All students register for a discussion section.
Style: 65% Lecture, 35% Discussion.
Grading: 20% final exam, 50% reports/papers, 15% quizzes, 15% class participation.
Exam Format: i.d. terms and short essays.

HIST 3417 Food in History
3 credit(s); Meets CLE req of Historical Perspectives;
Instructor: Pilcher, Jeffrey Michael
Description: Modern society is fixated on food. When we're not watching celebrity chefs on TV, we're worrying about E. coli in our peanuts or the other end of the equation, and we have it easy, historically speaking. Our ancestors were obsessed with the basic problem of avoiding starvation. This course is intended to help understand the significance of food in society from the earliest gatherers and hunters to the present with three main areas of focus. First, the class will examine the historical antecedents to the contemporary globalization of foods as well as the ways in which people have resisted globalization. Second, we will discuss how foods have helped to create and reinforce hierarchies in societies around the world. A third major theme will be the modern transformation of global diets caused by industrialization, colonialism, and proletarian migrations. The course will conclude by examining contemporary issues including the global spread of the fast food, biotechnology and the green revolution as well as body image and fusion cuisine.
Style: 70% Lecture, 30% Discussion.
Grading: 15% mid exam, 25% final exam, 60% written homework.
Exam Format: Essay.

HIST 3429 Latin American History in Film and Text
3 credit(s); Credit will not be granted if credit has been received for: LAS 3429; Meets CLE req of Arts/Humanities; meets CLE req of Global Perspectives;
Instructor: Chambers, Sarah C
Description: In the past two decades, there has been a creative explosion of films and documentaries representing women in Latin America, past and present. This course invites you to reflect critically upon those cinematic representations by placing them in the context of other historical and fictional narratives. For example, what can we learn about both the 17th and 20th centuries--by comparing the film "I, the Worst of All" (Dir. Maria Luisa Bemberg, 1990) with: Octavio Paz's biography of the 17th-century Mexican nun upon which the film is based, the writings of Sor Juana herself, and the analysis of her work by literary critics? We will compare two film versions of the life of Mexican artist Frida Kahlo: the recent movie starring Salma Hayek and a Mexican film directed by Paul LeDuc in 1984. In addition to several other feature films, we will also explore the roles of women as directors and actors in the Latin American and Hollywood film industries. This course has been approved for the arts/humanities core and global perspectives theme requirements.
Style: 20% Lecture, 30% Discussion, viewing films.
Grading: 40% reports/papers, 20% class participation, 40% analysis evaluation. Written reactions to films and readings.
HIST 3431 Early Africa and Its Global Connections
4 credit(s); Credit will not be granted if credit has been received for: AFRO 3431; Meets CLE req of Global Perspectives; meets CLE req of Historical Perspectives;
Instructor: Pohlantd-Mccormick,Helen
Description: Student may contact the instructor or department for information.

HIST 3461 Introduction to East Asia I: The Imperial Age
3-4 credit(s), max credits 4, 1 completion allowed; Credit will not be granted if credit has been received for: EAS 3461;
Instructor: Wang,Liping
Description: This is a comprehensive introduction to East Asia (China, Japan, Korea, and Vietnam) from prehistoric times to the sixteenth century. It traces the evolution of major political and economic institutions as ways to understand basic structures of political authority and systems of resource distribution in these societies. It outlines major schools of East Asian philosophy and religions, such as Confucianism, Daoism, and Buddhism, and discusses their development and influence in each of the four countries. It analyzes some of the most important features of East Asian society, i.e., family structure and gender relationships in ideology as well as in practice. As part of the overview of East Asian society and culture, the course also introduces main modes of artistic expression through various kinds of visual materials as well as visit to museum. The course stresses the inter-connections within East Asia while highlighting the distinctive paths of historical changes in each of the four countries.
Style: 80% Lecture, 20% Discussion.

HIST 3468 Social Change in Modern China
3 credit(s); Credit will not be granted if credit has been received for: HIST 3468;
Instructor: Wang,Liping
Description: This course explores major issues in modern Chinese society. It begins with the Opium War in 1840 and traces the relationship between anti-drug effort and state building to the 1990s. It examines the New Culture Movement in the 1920s and links it to the emergence of cosmopolitan culture, new women, and political nationalism. It retells the story of the Great Leap Forward in the 1950s and uses it to analyze the increasing urban/rural gaps under the PRC. It also devotes considerable time to the importance of gender and ethnicity since the early 20th century. Students will achieve a good understanding of modern China through reading and discussing up-to-date scholarship on these above themes and issues. This course is for undergraduate students, both majors and non-majors.
Style: 60% Lecture, 40% Discussion.
Grading: 80% reports/papers, 20% class participation.

HIST 3471 Modern Japan, Meiji to the Present (1868-2000)
3 credit(s); Credit will not be granted if credit has been received for: EAS 3471; Meets CLE req of Historical Perspectives;
Instructor: Mizuno,Hiromi
Description: From the land of samurai to the only non-Western colonial power, from the severely destructed nation of WWII "war criminals" to the postwar miracle, Japan went through immense changes from the mid-19th to the 21st century. How did the Japanese leaders and people make these changes and why? How have the Japanese themselves understood their changing nation and relationship to the world? How can we make sense of Japan's complicated past that made the nation "the Japan" we know today? This course explores the intellectual, cultural, and political aspects of Japan's modernization, the Pacific War, and postwar development, using visual images from museums, cartoons, advertisements, and films as well as fictional and non-fictional writings. The course is based on lecture but also integrates various kinds of assignments that stimulate discussion.
Style: 90% Lecture, film viewing
Grading: 70% reports/papers, 10% quizzes, 20% other evaluation. attendance
Exam Format: essay

HIST 3483 Hmong History Across the Globe
3 credit(s);
Instructor: Lee,Mai Na M.
Description: Student may contact the instructor or department for information.

HIST 3485 History of Southeast Asia
A-F only, 3 credit(s); Meets CLE req of Global Perspectives;
Instructor: Bashiri,Iraj
Description: This course provides a general introduction to Southeast Asia's past and present. The course is organized chronologically around three broad periods: 1) traditional states and societies (to 1800); 2) colonial transformations and indigenous responses (1800-1945); and 3) the emergence of four nation-states: Vietnam, Indonesia, Thailand, and Philippines. The course will explore several topics and themes, among them: the origins of indigenous states; religious conversion and practice; ethnicity, social organization, and gender relations; modern social and economic transformations; response to colonial domination; the development of "imagined communities" and nationalist and revolutionary movements; post-colonial societies and political systems; ethnic conflict and national integration; the impact of Cold War international relations; and U.S. involvement in the region.
Style: 90% Lecture, 10% Discussion.
Exam Format: essay

HIST 3503 Ancient Iran
3 credit(s); Credit will not be granted if credit has been received for: CAS 351;
Instructor: Bashiri,Iraj
Description: Ancient Persia played a vital role in the development of the cultures of the eastern Mediterranean Sea. In the north, while fighting the Greeks, ?Persia contributed to the rise of a number of intellectuals in the region ?of present-day southwestern Turkey. In the south, for two hundred and ?ten years Persia expanded Egyptian trade as far as India. In the center, Persia empowered the Phoenicians to control the Mediterranean Sea ?routes all the way to Gibraltar. The course studies these developments ?n the context of the growth of the empires of the Achaemenians and ?the Sassanians. The objectives of the course are: - Acquaint students with the culture of ancient Iran, especially the relation of that culture to other major ancient cultures - Equip students with the means for a better understanding and interpretation of the dynamics of ancient events - Teach students to distinguish different trends and accept them for what they are ? Discuss the roots of ancient conflicts and show that, like people, cultures keep events in memory and act upon them - Examine aspects of ancient Egyptian, Greek, and Iranian cultures and their contribution to the formation of an ancient world civilization.
Style: 60% Lecture, 10% Film/Video, 10% Discussion, 20% Student Presentation.
Grading: 81% reports/papers, 36% quizzes, 3% attendance. There are 3 tests (quizzes).
Exam Format: Essay

HIST 3504 The Cultures of the Silk Road
3 credit(s);
Instructor: Bashiri,Iraj
Description: The cultures of the Silk Road flourished in present-day Central Asia, Afghanistan, and Iran after the invasion of Alexander the Great. In time, the Road became the hub of activity, especially under the Sassanids and, later, under the Mongols. Even after the discovery of the sea routes made the movement of goods by caravans less profitable, Sufis and merchants continued to enhance the religious, social, political, and literary aspects of the region. Since the fall of the Soviet Union, there has been an attempt at reviving the Silk Road by creating an international network of scholarship about the Silk Road supported by the region's centers of learning and prominent international banks. The potential for the exchange of ideas across cultures for creating a better world is as promising a notion today as it was real in medieval times. The course is devised to acquaint students with the dynamics of the Silk Road, both in medieval and contemporary times. It equips them with...
the necessary information to understand, interpret, and accept ideas and actions that, on the surface, might appear alien and often unacceptable. The course emphasizes the contributions of the cultures of Central Asia, Afghanistan, and Iran to world civilization.

**Style:** 60% Lecture, 10% Film/Video, 10% Discussion, 20% Student Presentation.

**Grading:** 51% reports/papers, 36% quizzes, 3% attendance, 10% in-class presentation.

**Exam Format:** essay

**HIST 3505 Survey of the Modern Middle East**

3 credit(s); Credit will not be granted if credit has been received for: ARAB 3505; Meets CLE req of Global Perspectives;

**Instructor:** Hakim, Carol

**Description:** This course examines the history of the modern Middle East. It reviews the main political events in the region during the 19th and 20th centuries, as well as the underlying social, economic, and intellectual issues that have shaped the history of the Middle East in the modern era. Topics to be covered include the decline of the Ottoman Empire, imperialism and colonialism, nationalism and the rise of the modern states, Political Islam, and the evolution of post-independence states and societies up until the present.

**HIST 3507 History of Modern Egypt**

A-F only, 3 credit(s);

**Instructor:** Hakim, Carol

**Description:** Egypt is the most populous country in the Arab world and it has throughout the modern era played a central role in the history of the region and set trends in the political, socio-economic, cultural and intellectual spheres. The course examines the history of modern Egypt. It reviews the main political events, as well as the underlying social, economic, and intellectual issues that have shaped the history of this country in the 19th and 20th century. The course combines a chronological approach to the study of the history of modern Egypt with a more thematic focus on main issues and trends. Topics to be covered include: the impact of colonialism, imperialism, the rise of the national movement, the failure? of the liberal experiment, the uses and abuses of the 1952 Revolution and its legacy, and the rise of Islamist movements.

**HIST 3511 Muslims and Jews: Conflict and Co-existence in the Middle East and North Africa since 1700**

3 credit(s);

**Instructor:** Schroeter, Daniel J

**Description:** Muslims and Jews have coexisted and influenced each other over many centuries, especially in the Middle East and North Africa. While Muslim-Jewish relations in the 20th century have often been characterized exclusively by bitter enmity, in earlier centuries the interactions of Muslims and Jews have been characterized as a symbiotic relationship by some and a state of perpetual tension and conflict by others. This course will examine the diversity of social and cultural interactions between Muslims and Jews and between Islam and Judaism since 1700. It seeks to answer the question: what enabled the two religious communities to peacefully coexist and what were the causes of conflict? Why is the history of Muslim-Jewish relations such a contested issue today?

**HIST 3616 France in the Middle Ages**

3 credit(s);

**Instructor:** Reyerson, Kathryn L

**Description:** Student may contact the instructor or department for information.

**HIST 3637 Modern Russia: From Peter the Great to the Present**

3 credit(s);

**Instructor:** Stavrou, Theofanis G

**Description:** Student may contact the instructor or department for information.

**HIST 3704W Daily Life in Europe: 1300-1800**

3 credit(s); Meets CLE req of Global Perspectives; meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;

**Instructor:** Phillips, Carla Rahn

**Description:** Under the broad heading of “Daily Life in Europe,” we will examine various key issues in the lives of men and women in Europe between the Black Death and the Industrial Revolution. Some of the historical questions we will ask are: What were the rates of birth, marriage, and death in various European countries? What effect did epidemics and wars have on population size and age distribution? How and why did some of them travel from where they were born? Did their standards of living change over time? Who held the reins of power? How was society structured and how did social classes relate to one another? How and why did ordinary people rebel against governments and the privileged classes? What results did these rebellions have? What role did formal religion and other beliefs play in people’s lives? Was witchcraft a major force in society? These and other questions will shape the lectures, readings, and discussions in the course. Whether the readings deal with family and sexual behavior, farming, manufacturing, buying and selling goods, seafaring, religion, culture, or other topics, all of the authors discuss how interpretations have changed over time and offer their own revised interpretations of daily life in the past, based on an expanding body of documentary evidence. The class therefore introduces students, not only to the history of daily life in the early modern period, but also to the ways that historians interpret it, and the ways that they, as critical thinkers, can assess the interpretations of those historians.

**Style:** 80% Lecture, 20% Small Group Activities.

**Grading:** 20% mid exam, 40% final exam, 30% reports/papers, 10% class participation. Class participation includes attendance, discussion groups, and informal presentations. Students must complete all of the graded assignments in order to receive a grade for the course. Unexcused late work is penalized.

**Exam Format:** Essays, both short and long, plus a map on the mid-term. Students will know the questions for the final examination in advance.

**HIST 3705 From Printing Press to Internet: Media, Communications, and History**

A-F only, 3 credit(s); Credit will not be granted if credit has been received for: GLOS 3605;

**Instructor:** Wolfe, Thomas C

**Description:** This course is an examination of the emergence of modern communications systems used today in everyday life. It takes up themes and concepts that have been crucial in modern history, including the public sphere, print culture, the invention of journalism, and rational-critical discourse, and asks students to apply them to current issues and debates around contemporary media, including TV, radio, and the internet. Readings will range from Enlightenment classics-works by Kant, Condorcet, and Hume-to Wired Magazine.

**Style:** 25% Lecture. 75% Discussion.

**Grading:** 50% reports/papers, 25% in-class presentation, 25% class participation.

**HIST 3705 From Printing Press to Internet: Media, Communications, and History**

A-F only, 3 credit(s); Credit will not be granted if credit has been received for: GLOS 3605;

**Instructor:** Shank, JB

**Description:** This course is an examination of the emergence of modern communications systems used today in everyday life. It takes up themes and concepts that have been crucial in modern history, including the public sphere, print culture, the invention of journalism, and rational-critical discourse, and asks students to apply them to current issues and debates around contemporary media, including TV, radio, and the internet. Readings will range from Enlightenment classics-works by Kant, Condorcet, and Hume-to Wired Magazine.

**Style:** 25% Lecture. 75% Discussion.

**Grading:** 50% reports/papers, 25% in-class presentation, 25% class participation.
HIST 3272 Studies in 20th-Century Europe From the End of World War II to the End of the Cold War: 1945-91  
3 credit(s); Credit will not be granted if credit has been received for: GLO 3422  
Instructor: Ashkenazi,Ofer  
Description: Student may contact the instructor or department for information.

HIST 3724 Women, Revolution, and War in 20th Century Europe  
3 credit(s);  
Instructor: Lorcin,Patricia M E  
Description: What happens to women in times of revolution and war? How is war gendered? This course will seek to answer these questions by examining the involvement and reactions of European women to 20th century wars and revolutions. The conflicts covered will be the two World Wars, the Russian Revolution, the Spanish Civil War, the Algerian War of Independence and the wars following the break-up of Yugoslavia. An introductory lecture will precede each week's theme, but the emphasis of the course will be on reading and class interaction. Through primary and secondary source readings, class presentations and, above all, class discussions, we will look at the ways in which women contributed, resisted or merely submitted to twentieth century conflicts and assess the short and long-terms impact of these conflicts on their lives. Gender and gendering in situations of conflict will be constant themes throughout the course. The Assignments will include three 6-8 page papers, one of which will be a re-write, and a class presentation, as part of a group the size of which will depend on class size.

HIST 3821 United States in the 20th Century to 1945  
3 credit(s);  
Instructor: Lee,Erika  
Description: Student may contact the instructor or department for information.

HIST 3844 American Economic History to 1870  
3 credit(s);  
Instructor: Green,George David  
Description: The course gives close attention to five historical problems in early American economic development: Economic Growth And Regional Specialization Slavery And Southern Economic Development Railroads And Economic Growth The Role Of Government In Economic Development Economic Impact Of The Civil War There are several short readings for each topic, presenting different methods and interpretations. Students write 4-5 page analytical papers on four of the five topics and then we discuss them together in class. There are no exams.  
Style: 30% Lecture, 70% Discussion.  
Grading: 80% reports/papers, 20% class participation.  
Exam Format: no exams

HIST 3868 Race, War, and Race Wars in American History  
A-F only, 3 credit(s);  
Instructor: Lindquist,Malinda A  
Description: Student may contact the instructor or department for information.

HIST 3959 How to Do History  
A-F only, 3 credit(s); prerequisite History major or dept consent;  
Instructor: Phillips,Carla Rahn  
Description: Everything that happened in the past led to where we are today, but how do we go about understanding that past human experience? This course aims to prepare you to be a good consumer and producer of history, whether you are writing a senior paper in the History Department or simply learning what history is about, so you can better understand the complex world we live in. You will be introduced to the ways that historians investigate, interpret, and write about the past, as well as learning how to think critically about sources of historical information. You will read, discuss, and write about various historical sources and learn how to evaluate them. You will also be introduced to the rich collections of historical sources at the University of Minnesota and in the Twin Cities.

HIST 3959H Honors: How to Do History  
A-F only, 3 credit(s); prerequisite History major or dept consent;  
Instructor: Dubrow,Gail Lee  
Description: Student may contact the instructor or department for information.

HIST 3960 Topics in History  
1-4 credit(s), max credits 16, 5 completions allowed; prerequisite Jr or Sr or instr consent;  
Instructor: Shank,JB  
Description: Student may contact the instructor or department for information.

HIST 3960 Topics in History  
1-4 credit(s), max credits 16, 5 completions allowed; prerequisite Jr or Sr or instr consent;  
Instructor: Ashkenazi,Ofer  
Description: Student may contact the instructor or department for information.

HIST 3980W Supplemental Writing in History  
A-F only, 1 credit(s), max credits 4, 4 completions allowed; prerequisite instr consent; must take a 3-cr 3xxx or 5xxx course taken concurrently; meets CLE req of Writing Intensive;  
Instructor: STAFF  
Description: With the permission of the instructor of a history course, a student may add this one-credit independent study in order to make the course writing intensive. The student would then be expected to do additional written work, including the revision of at least one paper.

HIST 4961V Honors: Major Paper  
A-F only, 4 credit(s); prerequisite dept consent, instr consent; sign up in Undergraduate Studies Office two sem in advance; meets CLE req of Writing Intensive;  
Instructor: May,Larry L  
Description: Student may contact the instructor or department for information.

HIST 4961V Honors: Major Paper  
A-F only, 4 credit(s); prerequisite dept consent, instr consent; sign up in Undergraduate Studies Office two sem in advance; meets CLE req of Writing Intensive;  
Instructor: Reyerson,Kathryn L  
Description: Student may contact the instructor or department for information.

HIST 4961V Honors: Major Paper  
A-F only, 4 credit(s); prerequisite dept consent, instr consent; sign up in Undergraduate Studies Office two sem in advance; meets CLE req of Writing Intensive;  
Instructor: Mizuno,Hiromi  
Description: Student may contact the instructor or department for information.

HIST 4961W Major Paper  
A-F only, 4 credit(s); prerequisite dept consent, instr consent; sign up in Undergraduate Studies Office two sem in advance; meets CLE req of Writing Intensive;  
Instructor: May,Larry L  
Description: This course explores the relationship between American popular art and public life with an emphasis on the period since World War II. Unlike most explorations of the popular arts, we will examine through common readings and individual research projects how the popular arts engage creating national identity, who is included and excluded, what are the obligations of the citizen. We will examine these issues in the context of the rise of the United States to a world power, globalization, World War II, anti communism, civil rights, the Vietnam war, the counter culture and conservative resurgence since the 1970's. Topics of exploration will be race relations, the rise of film noir, the suburban domestic ideal, television, rock and roll and contemporary youth cultures. The format is designed within a seminar-discussion format with common readings and
exercises designed to create a well crafted research project. Students may write their papers on this theme in a country other than the U.S., but should consult with Professor May in advance. Common readings will be books such as Godfrey Hodgson, AMERICAN IN OUR TIME, George Lipsite Zeit PASSAGES, and Elaine May, HOMEWARD BOUND and Salman Rushdie, THE GROUND BENEATH HER FEET.

HIST 4961W Major Paper
A-F only, 4 credit(s); prereq dept consent, instr consent; sign up in Undergraduate Studies Office two sem in advance; Meets CLE req of Writing Intensive; Instructor: Bachrach,Bernard S
Description: Student may contact the instructor or department for information.

HIST 4961W Major Paper
A-F only, 4 credit(s); prereq dept consent, instr consent; sign up in Undergraduate Studies Office two sem in advance; Meets CLE req of Writing Intensive; Instructor: Reyerson,Kathryn L
Description: This course combines an introduction to historical research with the actual research experience of writing the senior paper in History. The first week will be devoted to an exploration of the use of documents and the varieties of historical writing. The research paper will focus on a topic of the student's choice and will be based on the investigation of primary sources (printed documents, memoirs, literature, etc.). Style: 100% Discussion.
Grading: 90% reports/papers, 10% class participation.

HIST 4961W Major Paper
A-F only, 4 credit(s); prereq dept consent, instr consent; sign up in Undergraduate Studies Office two sem in advance; Meets CLE req of Writing Intensive; Instructor: Mizuno,Hiromi
Description: Student may contact the instructor or department for information.

HIST 5051 Before Herodotus: History and Historiography of Mesopotamia and the Ancient Near East
A-F only, 3 credit(s); prereq Prev coursework in ancient Near Eastern history recommended; Credit will not be granted if credit has been received for: CNES 5051; Instructor: von Dassow,Eva
Description: Student may contact the instructor or department for information.

HIST 5264 Imperial Russia: Formation and Expansion of the Russian Empire in the 18th and 19th Centuries
3 credit(s), max credits 4, 1 completion allowed; Instructor: Stravrou,Theofanis G
Description: Student may contact the instructor or department for information.

HIST 5801 Seminar in Early American History
A-F only, 3 credit(s); Instructor: Norling,Lisa A
Description: Student may contact the instructor or department for information.

HIST 5900 Topics in European/Medieval History
A-F only, 1-4 credit(s), max credits 16, 5 completions allowed; prereq Grad or [advanced undergrad with instr consent]; Instructor: Karras,Ruth Mazo
Description: Student may contact the instructor or department for information.

HIST 5910 Topics in U.S. History
1-4 credit(s), max credits 16, 5 completions allowed; prereq Grad or advanced undergrad student with instr consent; Instructor: Lindquist,Malinda A
Description: Student may contact the instructor or department for information.

HIST 5920 Topics in African Social History
3 credit(s), max credits 15, 5 completions allowed; prereq Grad or instr consent; Instructor: Isaacman,Allen F
Description: Student may contact the instructor or department for information.

HIST 5950 Topics in Latin American History
A-F only, 1-4 credit(s), max credits 15, 5 completions allowed; prereq Grad or advanced undergrad with instr consent; Instructor: McNamara,Patrick J
Description: Student may contact the instructor or department for information.

HIST 5964 Comparative Economic History
A-F only, 3 credit(s); prereq instr consent; Instructor: Issett,Christopher Mills
Description: Student may contact the instructor or department for information.

HIST 5993 Directed Study
1-16 credit(s), max credits 20, 5 completions allowed; prereq [Grad student or sr], instr consent , dept consent , college consent; Instructor: Phillips,Carla Rahn
Description: Student may contact the instructor or department for information.

HIST 6015 Scope and Methods of Historical Studies
A-F only, 3 credit(s); prereq instr consent; Instructor: Wolfe,Thomas C
Description: Student may contact the instructor or department for information.

HIST 8644 Legal History Workshop
A-F only, 3 credit(s); prereq instr consent; Instructor: Deutsch,Tracey A
Description: Student may contact the instructor or department for information.

HIST 8910 Topics in U.S. History
A-F only, 1-4 credit(s), max credits 16, 5 completions allowed; Instructor: Karras,Ruth Mazo
Description: Student may contact the instructor or department for information.

HIST 8910 Topics in U.S. History
A-F only, 1-4 credit(s), max credits 16, 5 completions allowed; Instructor: Lindquist,Malinda A
Description: Student may contact the instructor or department for information.

HIST 8920 Topics in African History
A-F only, 1-4 credit(s), max credits 16, 5 completions allowed; Instructor: Isaacman,Allen F
Description: Student may contact the instructor or department for information.

History of Medicine
510 Diehl Hall (Box 506 Mayo)
HMED 3001W Health, Disease, and Healing I
4 credit(s); Credit will not be granted if credit has been received for: HMED 3001V; Meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;
Instructor: Shackelford,Jole Richard
Description: History of Medicine 3001W is a writing intensive survey of the history of Western biomedical ideas, research, and health care practices from the ancient Mediterranean and Middle Eastern foundations to the clinical movement of the early nineteenth century. These ideas and practices have left their marks on modern medicine and help explain the origins and appeal of today's alternative medicines as well. Many of our attitudes about the proper relationship between patient and practitioner, for example, are founded on the ideas set down by Hippocrates and Galen in ancient Greece and Rome. Today's herbal medicine is also in large measure shaped by the experiences and discoveries of early European and Middle Eastern healers. Similarly, one can find the origins of modern pseudo-scientific and quack medicines in early modern theories about how to regulate the kinds of and amounts of stimulation that people receive from their environments, which were believed to affect the healthy flow of fluids and spirits throughout the body.
Style: 20% Lecture, 60% Discussion, 15% Small Group
Grading: 15% mid exam, 25% final exam, 45% reports/papers, 15% class participation.
Exam Format: In-class, prose (essay-style) examinations.

HMED 3002W Health Care in History II
3 credit(s); Meets CLE req of Writing Intensive;
Instructor: Kernahan,Peter
Description: HMed 3002W is the second semester of a two-semester chronological survey of the social and intellectual history of western medicine and covers the period from approximately 1800 to the present. The course is self-contained and it is NOT necessary to have taken HMed 3001. The course will examine medicine both as a scientific and intellectual project and as an integral part of society and culture. We seek to understand how ideas about disease, therapy, and the organization of care for the sick reflect the historical context in which they are embedded. Among other topics, we will investigate changing medical and scientific ideas about the body and disease, the rise of the health professions, alternative medicine, the provider-patient relationship, and the economics of care from the days of the charity hospital and country practitioner to the present. Public health, preventive medicine, and infectious disease form an important part of this story.
Style: 60% Lecture, 10% Film/Video, 20% Discussion, 10% Guest Speakers. Two lectures and one small group discussion section per week.
Grading: 30% mid exam, 30% final exam, 10% attendance, 30% reflection paper.

HMED 3055 Women, Health, and History
3 credit(s);
Instructor: Gunn,Jennifer
Description: This course combines a lecture and seminar format. It will investigate women?7s historical roles as healers, patients, and health activists as well as men?7s roles and the relationships between them, primarily in the United States since 1800. Students will focus on how gender has played a role in the professionalization of medicine and how ideas about gender have affected scientific research. The course will address the history of sex and gender as ideas; medical and public discussion of mental illness, body image, reproductive issues, and ageing; sexuality; and the relationships between traditional and professional healers. It will also focus on the relationships between gender, race, and class relative to diagnosis and access to health care and medical education, as well as gendered facets of government health policy. Using secondary literature, primary sources such as diaries, and film, students will complete writing assignments that provide opportunities to explore individual interests. This course is intended for mid- to upper-level undergraduates. It does not require previous work in history or history of medicine.
Style: 20% Lecture, 60% Discussion, 15% Small Group Activities, 5% Student Presentation.
Grading: 10% mid exam, 10% final exam, 60% reports/papers, 20% class participation.
Exam Format: essay, short answer

HMED 3600 Directed Study
1-4 credit(s), max credits 12, 3 completions allowed; prereq instr consent ;
Instructor: Gunn,Jennifer
Description: Student may contact the instructor or department for information.

HMED 5045 Modern Medical Profession
3 credit(s);
Instructor: Gunn,Jennifer
Description: Student may contact the instructor or department for information.

HMED 8001 Foundations in the History of Early Medicine
A-F only, 3 credit(s);
Instructor: Shackelford,Jole Richard
Description: The key objective of this seminar is to provide graduate students from various backgrounds with an introduction to the early history of medicine in the Western tradition, from the earliest written records through the Enlightenment period in a format that permits in-depth reading and discussion of selected topics and opportunity for personal exploration of specific topics. It is designed to be a reading seminar that exposes students to selected primary sources by also a diversity of points of view on historical topics within the scope of early Western medicine. Knowledge of languages other than English is not required, but helpful for pursuing topics of individual interest. Students are expected to leave this seminar with an advanced introduction to the basic narrative themes, historiographical approaches, and research methods in the history of medicine.
Style: 5% Film/Video, 95% Discussion.
Grading: 40% reports/papers, 30% written homework, 30% class participation.

HMED 8112 Historiography of Science, Technology, and Medicine
A-F only, 3 credit(s); prereq instr consent ;
Instructor: Jones,Susan D.
Description: Student may contact the instructor or department for information.

HMED 8631 Directed Study
A-F only, 1-6 credit(s), max credits 12; prereq instr consent; 
Instructor: Gunn,Jennifer
Description: Student may contact the instructor or department for information.

HMED 8830 Topics in the History of Science, Technology, and Medicine
A-F only, 3 credit(s), max credits 9, 3 completions allowed; prereq instr consent ;
Instructor: Shackelford,Jole Richard
Description: Student may contact the instructor or department for information.

History of Science and Technology
381 Physics

HSCI 1714 Technology and Civilization: Stone Tools to Steam Engines
3-4 credit(s), max credits 4, 1 completion allowed; Credit will not be granted if credit has been received for: HSCI 3714; Meets CLE req of Historical Perspectives; meets CLE req of Technology and Society; 
Instructor: Alexander,Jennifer Kams
Description: Technology is an enormous force in our society, and this course asks how it became so important. We explore the historical background, development, and character of the most powerful technological systems the world has known, from...
University of Minnesota - Course Guide for Twin Cities Campus  

Fall 2011

pre-historic stone tool societies, through Egypt and the pyramids, ancient Greece and Rome, the explosion of Islam, and the dynamic and often violent technologies of medieval Europe. In this class, you will get to know your fellow students and find out what their interests are, and you will discuss historical problems with them in small groups and in discussion sections. You will listen to lectures and see films about particular technologies, and you will learn to ask key questions about each technology: who was involved? what were the circumstances? The course is designed for undergraduates from a variety of backgrounds, including engineering, literature, history, business, and the sciences.

**Style:** 60% Lecture, 5% Film/Video, 35% Discussion.

**Grading:**
- 15% mid exam, 20% final exam, 25% reports/papers, 5% in-class presentation, 25% other evaluation. NOTE: two midterm exams, with 15% each; 25% of grade based on discussion section

**Exam Format:** Essay exams.

**HSCI 1715 Technology and Civilization: Waterwheels to the Web**

3-4 credit(s), max credits 4, 1 completion allowed; Credit will not be granted if credit has been received for: HSCI 3715;
Meets CLE req of Historical Perspectives; meets CLE req of Technology and Society;

**Instructor:** Thomas, Mary Margaret

**Description:** HSCI 1715 is designed for undergraduates interested in technology and history, and enrolls students with wide interests in the liberal arts, science, and engineering. There is no prerequisite, but we explore the historical and social contexts of the development of the most powerful technological system the world has ever known: Western Europe's. We cover relations between technology and culture since the Industrial Revolution, the diffusion of industrial technologies around the world and how various cultures adopted/adapted them, and technology's social impact, especially on Western society. We begin with case studies of industrialization in Britain, Germany, and the United States, and the connection between industrialization and exploration and discovery. We next focus on how different societies created/reacted to technologies such as the steam engine and electricity, and how the small technologies of daily life contributed to the growth of a society increasingly dependent on technology. Finally, we look at the increasingly complex technological system that nations and corporations developed to manage people and machines, and how these technologies related to social, cultural, and scientific attitudes. We end by considering the technologies of violence and hope that have dominated much of the twentieth-century.

**Style:** 60% Lecture, 25% Film/Video, 15% Discussion.

**Grading:**
- 15% midterm exam, 20% final exam, 30% reports/papers, 20% additional semester exams, 5% attendance, 10% class participation. 1715 students will do three papers, 3-5 pages each. 3715 students will do one 12-15 page research paper, with three components.

**Exam Format:** Short identification, essay.

**HSCI 1815 Revolutions in Science: Lavoisier, Darwin, and Einstein**

3-4 credit(s), max credits 4, 1 completion allowed; Credit will not be granted if credit has been received for: HSCI 3815;
Meets CLE req of Global Perspectives; meets CLE req of Historical Perspectives;

**Instructor:** Janssen, Michel

**Description:** This class is the second part of a two-semester introductory survey of the history of science. The two parts can be taken independently of one another. This class covers a selection of developments in physics, chemistry, biology, and geology from the 19th-20th C. We will trace the reasoning and some of the leading scientists involved, while being sensitive to the broader social and cultural contexts in which they worked. We also pay attention to the ways in which we obtain knowledge and how that has changed over the last two centuries. We also pay attention to how the development of technology has shaped science, and vice versa. We pay attention to how the development of genetics and its relation to evolutionary theory and human genetics and its relation to eugenics as well as comparative studies of technology in the Soviet Union and the United States in the 1930s, and an analysis of these scientific developments on society. In particular, we look at the reaction of various religious groups to Darwins theory and at the development of nuclear weapons made possible by the development of modern physics. We pay special attention to the increasingly international character of science during the period covered in this class, while emphasizing differences between the developments in various countries (notably Britain, Germany, France, and the United States). The objective of the course is to give you a better understanding not just of the historical development of scientific ideas but also of the role science plays in modern societies by tracing how it came to play that role.

**Style:** 75% Lecture, 25% Discussion.

**Grading:**
- 15% midterm exam, 25% final exam, 45% reports/papers, 5% class participation, 10% other evaluation. attendance

**Exam Format:** combination of short essay questions and multiple choice (old exams will be made available)

**HSCI 3211 Biology and Culture in the 19th and 20th Centuries**

3 credit(s); Credit will not be granted if credit has been received for: HSCI 5211; Meets CLE req of Historical Perspectives;

**Instructor:** Borrello, Mark E

**Description:** The purpose of this course is to explore the development of the biological sciences from the 19th century nativist tradition to the experimental, quantitative science of the 20th century. The course will focus on the areas of evolutionary biology, genetics, molecular biology and behavioral biology among others. From the outset, all of the varied branches of biology interacted in complex ways, yet each pursued its own set of questions and developed unique methods to investigate them. Through the examination of some of the key figures and advancements in biology we will develop a clearer understanding of the process of science. We will also pay close attention to the dynamic relationship between the science and the historical and cultural context within which they developed. The course will be divided into three sections. In the first section we will look at the naturalist tradition as represented in the work of Charles Darwin and A.R. Wallace and the early work in embryology and developmental biology. In the second section we will look at the development of genetics and its relation to evolutionary theory and attempt to understand the complicated relationship between genetics and eugenics. Finally, we will examine the recent history of molecular biology and the attempts to reconnect the study of genetics, development and evolution. This course provides an opportunity for the investigation of the connections between biology and the broader cultural, economic and political contexts.

**Style:** 50% Lecture, 50% Discussion.

**HSCI 3244 History of Ecology and Environmentalism**

3 credit(s); Credit will not be granted if credit has been received for: HSCI 5244; Meets CLE req of Environment;

**Instructor:** Rumore, Gina Maria

**Description:** Student may contact the instructor or department for information.

**HSCI 3332 Science and American Culture**

3 credit(s); Credit will not be granted if credit has been received for: HSCI 5332; Meets CLE req of Diversity and Social Justice US; meets CLE req of Historical Perspectives;

**Instructor:** Rumore, Gina Maria

**Description:** Student may contact the instructor or department for information.

**HSCI 3333V Honors Course: Issues in American Science and Technology in the Past Century**

A-F only; 3 credit(s); Meets CLE req of Civic Life and Ethics; meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;

**Instructor:** Kohlstedt, Sally Gregory

**Description:** Science and technology were defining elements in twentieth-century American life in the United States and indeed in much of the world. Using case studies involving such topics as eugenics as well as comparative studies of technology in the Soviet Union and the United States in the 1930s, and an analysis...
HSCI 3714 Technology and Civilization: Stone Tools to Steam Engines
3-4 credit(s), max credits 4, 1 completion allowed; Credit will not be granted if credit has been received for: HSCI 1714; Meets CLE req of Historical Perspectives; meets CLE req of Technology and Society;
Instructor: Alexander, Jennifer Kams
Description: Technology is an enormous force in our society, and this course asks how it became so important. We explore the historical background, development, and character of the most powerful technological systems the world has known, from pre-historic stone tool societies, through Egypt and the pyramids, ancient Greece and Rome, the explosion of Islam, and the dynamic and often violent technologies of medieval Europe, concluding with a critical analysis of the steam engine. In this class, you will get to know your fellow students and find out what their interests are, and you will discuss historical problems with them in small groups and in discussion sections. You will listen to lectures and see films about particular technologies, and you will learn to ask key questions about each technology: who was involved? what were the circumstances of its development and use? The course is designed for undergraduates from a variety of backgrounds, including engineering, literature, history, business, and the sciences. Those enrolled in HSCI 3714 will also write a research paper on the history of a technology of their choice.
Style: 55% Lecture, 35% Discussion.
Grading: 25% mid exam, 20% final exam, 30% reports/papers, 25% class participation. note: two midterm exams
Exam Format: short answer and short essay

HSCI 3715 Technology and Civilization: Waterwheels to the Web
3-4 credit(s), max credits 4, 1 completion allowed; Credit will not be granted if credit has been received for: HSCI 1715; Meets CLE req of Historical Perspectives; meets CLE req of Technology and Society;
Instructor: Thomas, Mary Margaret
Description: HSCI 3715 is designed for undergraduates interested in technology and history, and enroll students with wide interests in the liberal arts, science, and engineering. There is no prerequisite. We explore the historical background and development of the most powerful technological system the world has ever known: Western Europe's. We cover relations between technology and culture since the Industrial Revolution, the diffusion of industrial technologies around the world and how various cultures adapted/adopted them, and technology's social impact, especially on Western society. We begin with case studies of industrialization in Britain, Germany, and the United States, and the connection between industrialization and exploration and discovery. We next focus on how different societies created/reacted to technologies such as the steam engine and electricity, and how the small technologies of daily life contributed to the growth of a society increasingly dependent on technology. Finally, we look at the increasingly complex technological system that nations and corporations developed to manage people and machines, and how these technologies related to social, cultural, and scientific attitudes. We end by considering the technologies of violence and hope that have dominated much of the twentieth-century.
Style: 60% Lecture, 25% Film/Video, 15% Discussion.

Grading: 15% mid exam, 20% final exam, 30% reports/papers, 20% additional semester exams, 5% attendance, 10% class participation. 1715 students will do three 3-5 page papers over the course of the semester. 3715 students will do one larger research project, 12-15 pages, that has three components.
Exam Format: Short identification, essay.

HSCI 3815 Revolutions in Science: Lavoisier, Darwin, and Einstein
3-4 credit(s), max credits 4, 1 completion allowed; Credit will not be granted if credit has been received for: HSCI 1815; Meets CLE req of Global Perspectives; meets CLE req of Historical Perspectives;
Instructor: Janssen, Michel
Description: This class is the second part of a two-semester introductory survey of the history of science. The two parts can be taken independently of one another. This class covers a selection of developments in physics, chemistry, biology, and geology from the 18th-20th C. We examine the reasoning of some of the leading scientists involved, while being sensitive to the broader social and cultural contexts in which they worked. We also pay attention to the ways in which we obtain knowledge in the history of science. To allow for meaningful analysis of the material, the course is clustered around a few pivotal episodes: the chemical revolution of the late-18th C., the Darwinian revolution of the 19th C and the relativity and quantum revolutions of the early-20th C. We also study the impact of these scientific developments on society. In particular, we look at the reaction of various religious groups to Darwin's theory and at the development of nuclear weapons made possible by the development of modern physics. We pay special attention to the increasingly international character of science during the period covered in this class, while emphasizing differences between the developments in various countries (notably Britain, Germany, France, and the United States). The objective of the course is to give you a better understanding not just of the historical development of scientific ideas but also of the role science plays in modern societies by tracing how it came to play that role.
Style: 75% Lecture, 25% Discussion.
Grading: 10% mid exam, 10% final exam, 65% reports/papers, 5% class participation, 10% other evaluation. attendance
Exam Format: a combination of short essay questions and multiple choice (old exams will be made available)

HSCI 5211 Biology and Culture in the 19th and 20th Centuries
3 credit(s); Credit will not be granted if credit has been received for: HSCI 3211;
Instructor: Borrello, Mark E
Description: The purpose of this course is to explore the development of the biological sciences from the 19th century naturalist tradition to the experimental, quantitative science of the 20th century. The course will focus on the areas of evolutionary biology, genetics, molecular biology and behavioral biology among others. From the outset, all of the varied branches of biology interacted in complex ways yet each pursued its own set of questions and developed unique methods to investigate them. Through the examination of some of the key figures and advancements in biology we will develop a clearer understanding of the process of science. We will also pay close attention to the dynamic relationship between the science and the historical and cultural context within which they developed. The course will be divided into three sections: in the first section we will look at the naturalist tradition as represented in the work of Charles Darwin and A.R. Wallace and the early work in embryology and developmental biology. In the second section we will look at the development of genetics and its role in evolutionary theory; and attempt to understand the complicated relationship between genetics and demographic. Finally we will examine the recent history of molecular biology and the attempts to reconnect the study of genetics, development and evolution. This course provides an opportunity for the investigation of into the connections between biology and the broader cultural, economic and political contexts.
Style: 50% Lecture, 50% Discussion.

HSCI 5244 History of Ecology and Environmentalism
HMNG 1001 Introduction to Hmong Language
5 credit(s); Credit will not be granted if credit has been received for: HMNG 3023.
Instructor: Vang,Bee
Description: This 4xxx-level course is a special option for graduate or professional students to take the 1xxx-level Beginning Hmong course for reduced credits. If you are a graduate or professional student, you may register for Beginning Hmong under the 4001 course number for 3 credits. Credit will not be granted if credit has been received for HMNG 1011.

Beginning Hmong 1011 is a course that teaches Hmong to true beginners (native speakers and non-native speakers). Students who have inherited the basics of the written language are advised to take the Accelerated Hmong course offers on Monday and Wednesday. The contents of Beginning Hmong 1011 include an exposure to the primary level of the written language, basic everyday conversation, and elementary vocabularies. The course will familiarize students with Hmong alphabets (tone markers, singular and plural vowels and consonants), pronunciation, sentence structure, and the parts of speech. Class activities will be designed surrounding health, education, and consumer themes. A minimum exploration of Hmong culture will be emphasized. Upon completion of this course, students are expected to be able to converse in simple Hmong dialogues and compose simple paragraphs. Required Texts The text for the course is Phau Xyaum Nyeem Ntaaw Hmong Dawb. There will also be supplemental materials provided by the instructor. You can find the Text at Paradigm.

HMNG 1015 Accelerated Beginning Hmong
5 credit(s); prereq Ability in basic spoken Hmong; Credit will not be granted if credit has been received for: HMNG 4005.
Instructor: Vang,Bee
Description: Student may contact the instructor or department for information.

HMNG 3290 Hmong Language Teaching Tutorial
S-N only, 1 credit(s), max credits 2; prerequisite: Grade of A in 3022.
Instructor: Vang,Bee
Description: Student may contact the instructor or department for information.

HMNG 4001 Beginning Hmong
3 credit(s); Credit will not be granted if credit has been received for: HMNG 1011.
Instructor: LeYang,Maxwell
Description: This 4xxx-level course is a special option for graduate or professional students to take the 1xxx-level Beginning Hmong course for reduced credits. If you are a graduate or professional student, you may register for Beginning Hmong under the 4001 course number for 3 credits. Credit will not be granted if credit has been received for HMNG 1011.

Beginning Hmong 4001 is a course that teaches Hmong to true beginners (native speakers and non-native speakers). Students who have inherited the basics of the written language are advised to take the Accelerated Hmong course offers on Monday and Wednesday. The contents of Beginning Hmong 4001 include an exposure to the primary level of the written language, basic everyday conversation, and elementary vocabularies. The course will familiarize students with Hmong alphabets (tone markers, singular and plural vowels and consonants), pronunciation, sentence structure, and the parts of speech.
Class activities will be designed surrounding health, education, and consumer themes. A minimum exploration of Hmong culture will be emphasized. Upon completion of this course, students are expected to be able to converse in simple Hmong dialogues and compose simple paragraphs. Required Texts The text for the course is Phau Xyaum Nyeem Ntawv Hmong Dawb. There will also be supplemental materials provided by the instructor. You can find the Text at Paradigm.

**Style:** 50% Lecture, 25% Discussion, class and project activities

**Grading:** 30% final exam, 30% quizzes, 15% in-class presentation, 10% class participation, 10% problem solving, 10% other evaluation. Project

**Exam Format:** multiple choice, short answers, true/false

**HMNG 4003 Intermediate Hmong**

3 credit(s); prereq 4002, grad student; Credit will not be granted if credit has been received for: HMNG 3021;

**Instructor:** Vang, Bee

**Description:** Student may contact the instructor or department for information.

**HMNG 4003 Intermediate Hmong**

3 credit(s); prereq 4002, grad student; Credit will not be granted if credit has been received for: HMNG 3021;

**Instructor:** LeYang, Maxwell

**Description:** Student may contact the instructor or department for information.

**HMNG 4005 Accelerated Beginning Hmong**

3 credit(s); prereq Ability in basic spoken Hmong, grad student; Credit will not be granted if credit has been received for: HMNG 1015;

**Instructor:** Vang, Bee

**Description:** Student may contact the instructor or department for information.

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### Honors Seminar 20 Nicholson Hall

**HSEM 2053H Honors Seminar: The Psychology of Paranormal Phenomena**

A-F only, 3 credit(s), max credits 6; prereq [Fr or soph] honors student;

**Instructor:** Fletcher, Charles R

**Description:** HSEM 2053H The Psychology of Paranormal Phenomena Research has shown that most Americans hold one or more supernatural, paranormal or pseudoscientific beliefs. These include beliefs in mind reading, fortune telling, psychokinesis, remote viewing, therapeutic touch, out-of-body experiences, alien abduction, and cryptozooology (Bigfoot, the Loch Ness Monster, etc.). This course has two goals: The first is to introduce students to critical thinking and behavioral research methods. The second is to critically evaluate the evidence for a variety of supernatural, paranormal and pseudoscientific claims.

Students will design and carry out their own experimental tests of these claims. The course will also include a guest lecture and demonstration by a local psychic. Class structure: mix of lecture, discussion, and student presentations. Work load: reading 50 pages per week writing: two 3-page papers and one 5-page paper exam: five quizzes (no final) presentations: participation in a group presentation covering two class meetings Grade base: quizzes: 20%; papers: 30%; group presentations: 40% Charles R (Randy) Fletcher holds a B.A. in Psychology from the University of California at Berkeley and a Ph.D. in Psychology from the University of Colorado at Boulder. He conducts research on the psychological processes involved in reading and language comprehension. He teaches the Psychology Department’s Honors Research Practicum and a course on The Psychology of Language.

**HSEM 2054H Honors Seminar: Becoming American: Life Experiences of Immigrants**

A-F only, 3 credit(s), max credits 6; prereq [Fr or soph]

**Instructor:** Lee, Richard M

**Description:** HSEM 2054H Becoming American: Life Experiences of Immigrants Although we live in a nation of immigrants, the developmental lives of immigrants and children of immigrants are not well understood. This course challenges students to critique and look beyond assimilationist models of adaptation and adjustment. Drawing upon psychological theory and research, as well as interdisciplinary ethnic studies scholarship, the course engages students in an analysis of the ways in which race, ethnicity, and migration interact with each other in the everyday lives of individuals and families from immigrant backgrounds. To facilitate learning, students are encouraged to go out of the classroom to apply theory and research in local immigrant communities. Students also will work on a class research project to survey a chosen immigrant community to learn hands-on how psychological research can inform our understanding of immigration on development and well-being. Richard Lee, Associate Professor of Psychology, studies the different ways in which race, ethnicity, and migration affect the development, well-being, and mental health of individuals and families. His recent work has focused on how internationally adopted Korean children and adolescents negotiate what it means to be adopted and to be a racial minority in one’s family and in society. Dr. Lee also conducts research on ethnic identity development, perceived discrimination, and acculturation conflicts in immigrant Asian American families. In his spare time, he rides his bike around town to find the best places to sing karaoke with his friends.

**HSEM 2101H Honors Seminar: Food and Drug Safety: Whom Can You Trust?**

A-F only, 2 credit(s), max credits 6; prereq [Fr or soph] honors student;

**Instructor:** Siliciano, Paul G

**Description:** HSEM 2101H Food and Drug Safety: Whom can you trust? Each time you pick up the newspaper, you are likely to find an article describing concerns about food or drug safety. Often, new studies are released that contradict the findings of previous studies. For example, hormone replacement therapy for postmenopausal women has been through repeated cycles of recommendation and rejection over the past 30 years. How does the consumer know which study to believe? Consider the case of Vioxx, a non-prescription pain reliever and anti-inflammatory drug, which was widely prescribed and earned billions of dollars for Merck. Five years after its introduction, Vioxx was linked to heart disease and withdrawn, and Merck lost billions in lawsuits. How did Vioxx go from a trendy drug to potential poison? Why did the safety testing not reveal this serious complication? This seminar will introduce students to the processes of food and drug testing, basic statistical analysis, and elementary biochemistry. Students will use the primary literature to research safety studies, and to learn how the body metabolizes foods and drugs. The course is designed for non-science majors, but a background in high school chemistry is required. Class structure: Each student will make two presentations during the term.

Topics will be selected in consultation with the instructor, and the presentations should be 20-30 minutes long. Students will research their topics in depth, including an examination of the primary scientific literature in their topic. Students should also research the social, economic, and global aspects of their topics. Each presentation will be graded on the depth and quality of the background research and on the clarity of the presentation. Each presentation must include thorough and careful citations detailing each research source used. Each presentation will account for 40% of the final grade, with class participation accounting for the final 20%. Paul Siliciano received his AB from Princeton University and his PhD from the University of Pennsylvania. After a postdoctoral fellowship at the University of California, San Francisco, he came to Minnesota and set up his lab studying RNA metabolism. He has taught everything from freshman biology to advanced graduate seminars, but his favorite courses to teach are those that introduce practical biochemistry to non-majors.

**HSEM 2627H Honors Seminar: Antibiotics: Promise, Pitfalls,
and Profits
A-F only, 3 credit(s), max credits 6; prerequisite [Fr or soph]
honors student;
Instructor: Haeri, Bobak F T
Description: HSEM 2801H Think Like a Lawyer: The Art & Adventure of Torts Law is the underpinning of modern society. No matter what career path you choose, it will affect it in some way. This seminar offers an introduction into legal thinking: Not merely what the laws are, but why we have them and, more importantly, how we come up with them. The ability to understand legal thinking is invaluable in any profession, including business, law, health or even art. As a focus, we will be examining the development, production, and use of antibiotics in soil and on their use in the biological control of plant diseases. Dr. Christine Salomon is an Assistant Professor at the UMN Center for Drug Design. Her research focuses on the ecology and evolutionary biology of antibiotic-producing bacteria in soil and on their resistance to common antibiotics as well as antibiotic contamination in the environment. Antibiotic resistance currently represents a significant threat to treatment of some infectious bacteria, yet profit incentives and patenting regulations have limited investments by pharmaceutical companies in development of new antibiotics. This course will explore the intriguing biology, chemistry, ecology and evolutionary biology of antibiotic resistance; the history of antibiotic discovery; the broad uses for antibiotics in medicine and agriculture; the costs, profits, and patenting issues associated with antibiotic development and production; the ethics of antibiotic regulation in developed and developing countries; and the future of antibiotic therapies in medicine and agriculture. Students will participate actively in reading and discussing literature on the science, history, ethics, and public policy issues related to antibiotic development, production, and use. Invited speakers working on the front-lines of antibiotic development, use, and patenting will contribute to the class. Students will participate in individual and group project presentations to critically evaluate current challenges related to antibiotic use. Class structure: The class structure will be discussion-based and include small- and large-group interactions focused on readings and visiting speakers, participation in one or more short laboratory demonstrations, and student presentations. Workload: The workload will include approximately 10 pages of reading per week, 5 short homework exercises, and a final presentation. There will be no exams. Class participation will be emphasized. Grade basis: 80% participation 10% homework, 10% student presentations.

Linda Kinkel is a Professor in the Department of Plant Pathology. Her research focuses on the ecology and evolutionary biology of antibiotic-producing bacteria in soil and on their use in the biological control of plant diseases. Dr. Christine Salomon is an Assistant Professor at the UMN Center for Drug Design. Her research program is focused on the discovery of novel natural products from microbes with antibiotic and anti-cancer activities. Drs. Salomon and Kinkel have several collaborative projects together to explore signaling, chemical ecology and evolutionary adaptations of soil bacteria.

HSEM 3008H Honors Seminar: Anthropology of Social Class
A-F only, 3 credit(s), max credits 6; prerequisite [Fr or sr]
honors student;
Instructor: Lipsett, David M
Description: HSEM 3008H Anthropology of Social Class This course is divided into two parts, each of which has different but related goals. The first part of the class concerns three topics. First, differences between cultural anthropology and sociology with respect to the study of class difference will be introduced. Secondly, the major theories about hierarchy in pre-state society will be examined. Third, main theories and concepts in the study of class stratification in complex societies will be surveyed. The second part of the class will be ethnographic. It will focus on class ideology and social practices in France, the USA and the UK in particular. The focus will be on class in everyday life in the domains of education, consumption, romance, sport and language. Two field trips are scheduled. The first will be to the Minneapolis Museum of Art. The second will be to the Dorothy Day Center in St. Paul. Throughout the course, in addition, we will make use of representations of class in Western popular culture, such as TV, magazines and Hollywood movies. The meaning of rank in society. Hierarchy in pre-state society. David Lipsett is a cultural anthropologist, the author of two books and many articles. He has done fieldwork in Papua New Guinea since 1981.

HSEM 3017H Honors Seminar: Youth in Media and Real Life
A-F only, 3 credit(s), max credits 6; prerequisite [Fr or sr]
honors student;
Instructor: Baizerman, Michael Leon
Description: HSEM 3017H Youth in Media and Real Life Media typically portray teenagers and young adults using images which emphasize youth as troubled, troubling and in trouble. While these young people who do delinquent acts, become pregnant, use drugs and are gang members, this population is emphasized youth as troubled, troubling and in trouble. While these young people who do delinquent acts, become pregnant, use drugs and are gang members, this population is emphasized youth as troubled, troubling and in trouble. While these young people who do delinquent acts, become pregnant, use drugs and are gang members, this population is emphasized youth as troubled, troubling and in trouble. While these young people who do delinquent acts, become pregnant, use drugs and are gang members, this population is emphasized youth as troubled, troubling and in trouble. While these young people who do delinquent acts, become pregnant, use drugs and are gang members, this population is described in the literature on youth. Particular attention will be given to the topic of ?moral panic? as a frame for understanding problematic youth. Students will write short papers each week on a media portrayal of youth and on their visit/interview with a youth, as well as write a final project on a media image of youth of special interest to them. Guidelines for these papers will be developed with students. The course will be Writing Intensive. Grade basis: 60% participation 40% quality of weekly assignments. Weekly assignments 50% 2. Final Project 30% 3. Class participation 20% You are expected to attend every class session. Michael L. Baizerman is a long time Youth Studies faculty, teaches courses on understanding youth, youth cultures and subcultures and research with and about young people. Active in community youthwork development, and internationally on youth policy, programs, and youthworker training.

HSEM 3021H Honors Seminar: Comics & Movies: Aesthetics, Politics, Pop Culture
A-F only, 3 credit(s), max credits 9, 3 completions allowed;
prerequisite [Fr or sr]
honors student;
Instructor: Johnson, Kiel Wayne
Description: 

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
Description: HSem 3021H Comics & Movies: Aesthetics, Politics, Pop Culture Comics and movies have long been considered among the lowest forms of art and entertainment? Why? Is it a social amuse, or a stuff,? or just a 10%, and never more so than when combined in the form of the ?comic book movie.? At the same time, both have periodically entered into critical and political legitimacy, posing aesthetic, moral and political questions over their (sometimes positive, usually negative) value and social effects. The purpose of this seminar is to open, investigate, challenge, and explore these common assumptions. We will look closely at particular comics and their cinematic translations, ranging from Superman and Batman to Watchmen, Sin City, Scott Pilgrim, Kick-Ass, American Splendor, Ghost World, Persepolis, and Akira to examine the affinities, similarities, and crucial differences between these media. We will look for the influence of comics in non-comic-book films, from the popular to the avant-garde. We will trace the histories of each medium, examining their form, content, and social implications, looking for their points of intersection that lead to the present proliferation of comic book films. And, throughout, we will ask (and ask again) the core questions: What is a ?comic?? What is a ?movie?? What could each be? Are either ?art,? in and of themselves or when combined? What effects have comic book aesthetics and language had on movies, and vice versa? What crucial critical functions have each medium served over time, and do they still, today, as each have become popular and profitable enterprises? Students will also have the opportunity in their work to small group presentations to explore genres and titles of particular interest to them. You don't need to be a comics- or movie-geek to participate; all are welcome for a thoughtful, serious and, yes, fun experience. Kjel Johnson has been teaching introductory, intermediate, and advanced courses since 1998 on film, media, violence, politics, and modern and postmodern culture for the Department of Cultural Studies & Comparative Literature, the Studies in Cinema and Media Culture major, College of Liberal Arts Honors, Institute for Advanced Studies, and Carleton College. Regardless of the topic, his work in research and in the classroom emphasizes the importance of popular culture and the metacriticism of established critical positions, always asking the question, how do we make sense of the world around us and our place within it? A good anti-establishment academic, he lives in the suburbs with his wife and two young children, drives an SUV, and enjoys irony.

HSEM 3025H Honors Seminar: Monsters, Sleuths, and Femme Fatales
A-F only, 3 credit(s), max credits 6; prereq [Jr or sr] honors student;

Instructor: Cucullu, Lois B

Description: HSem 3025H Monsters, Sleuths, and Femme Fatales From 1886 to 1897, in little over a decade, would burst on the literary scene a series of characters that soon assumed iconic status at home and abroad? Jekyll and Hyde, Sherlock Holmes, Dorian Gray, Salome, Svengali, and Dracula. These characters and their appearance in print and on stage and in film helped make celebrities of their authors? Robert Louis Stevenson, Arthur Conan Doyle, Oscar Wilde, George du Maurier, Bram Stoker. This honors course investigates the historical, cultural, and material circumstances surrounding this transformative culture of literary culture. In the seminar, we shall ask, technological innovations, and cultural anxieties arising from the growth of cities on one hand, and the expansion of imperial rule on the other, fueled this unprecedented eruption of eccentric figures? What role did the sciences play, whether in methodology or in the new knowledge being produced around questions of degeneration, criminality, and abnormality? And to what can we attribute the longevity of these figures? We shall consider the cultural moment of each and the impact this group has had on audiences near and far as these characters continue to circulate in popular culture over a hundred years later. Class structure: seminar, discussion oriented Work load/grade base: on average, 88 pages (reading per week); 2-3 pages each (20%); on essay examination (20%); proposal of one page and seminar essay of 10-12 pages (40%); colloquium presentation (10%); active seminar participation.

HSEM 3026H Honors Seminar: Apartheid's Aftermath: South African Lit & Film
A-F only, 3 credit(s), max credits 6; prereq [Jr or sr] honors student;

Instructor: Sugnet, Charles J

Description: HSem 3026H Apartheid's Aftermath: South African Lit & Film After spending the first two weeks learning about the nature of the apartheid system, this seminar will attempt to understand developments in South Africa since the ?end of apartheid? by surveying cultural production there since 1990, including the fiction and the critical writing of Woe Wicomb, J. M. Coetzee's prizewinning Disgrace, the writings and the amazing animated films of William Kentridge, and the various efforts to interpret the Truth and Reconciliation Commission (including Antjie Krog's The Country of My Skull, Jane Taylor's Ubu and the Truth Commission, and the U.S.-made documentary Long Night's Journey into Day). This is by no means a strictly literary course: theater, film, video, television, music, and other cultural forms will be considered in their historical, economic, and political contexts. Students from all disciplines welcome (and needed)? Understanding of South African developments will proceed partly by comparison with civil rights and race relations in the U.S., through writings by Rob Nixon and others who have traced the longstanding cultural relations between the U.S. and South Africa. Course structure: Lectures are brief. Focused discussion of the assigned readings; student reports; and daily participation Work load: The reading load is fairly heavy (perhaps 150-200 pages per week), but much if it is in novels and very gripping memoirs which are more pleasant and faster to read than a text book. Grade base: 1. A course notebook in which students write informal responses to readings,films, and class discussions, and occasionally write short, informal essays on topical assigned at class. Notebooks will be collected, commented on, and evaluated at intervals during the term. Together with class participation, the notebook accounts for 50% of grade. 2. A modest independent reading/research project on some aspect of South Africa undertaken by each student in an area, genre or period of her or his interest, resulting in a short written report (4-8 pages) and an even shorter informal oral report (2-5 min) to the rest of the class. This assignment will be discussed more fully and suggested topics proposed in class. (25%) 3. A take-home essay of 8-10 pages on a topic distributed by the instructor near the end of the term. This will not be a comprehensive final, but will provide an occasion for synthetic reflection on the course readings, and will count for 25% of the course grade. Professor Charles Sugnet specializes in African Literature and Film. He has been awarded two Fulbright grants (Senegal & Tunisia) and a Mellon grant for research in South Africa, and has published a history of African cinema with Greenwood Press, and a number of articles on African literature. He recently organized the first symposium on and exhibition of African film at the Walker Art Center, and is teaching a film course at the University of Cape Town during spring 2011.

HSEM 3039H Honors Seminar: Living With the Mississippi River
A-F only, 3 credit(s), max credits 6; prereq [Jr or sr] honors student;

Instructor: Nunnally, Patrick

Description: HSem 3039H Living With the Mississippi River (Environment theme) Living with the Mississippi? gathers students from diverse colleges across the University and engages them with the Mississippi River's challenges in a way that allows them to produce a body of work that is directly relevant to the work of planning, policy-making, research and design toward a sustainable Mississippi River. Working toward a sustainable Mississippi River. Working
collectively, biological and physical scientists, planners, designers, advocates, and people involved in public interpretation and education must develop a 21st century? approach to preserving the urban Mississippi. The framework that uses the river as a community, environmental, and economic asset without diminishing the river? s key ecological functions upon which we depend. Students in this course will combine knowledge from natural and social sciences with policy, planning, and design frameworks to develop realistic, potentially feasible solutions to river-related challenges and community partners. Class structure: This seminar will undertake many “active learning” strategies during the semester with students, both individually and in groups, asked to lead discussions, short reflective writings assigned as discussion starting points, and extensive use of a course Moodle site as a means of establishing continuity among our discussions. Work load: Students are asked to read 2-4 short pieces every week; page numbers vary considerably because the general level of difficulty of the assignments is quite variable. Readings are drawn from professional and scholarly papers, agency technical and public reports, journalism, web-based readings, and other materials as appropriate. Written material for the course includes a field-web exercise (5-10 pp), a digital collection/assessment (7-10 pp plus assets suitable for posting to the web), and the final project, which is usually a group project with each student’s contribution encompassing 5 pages +/- . In addition, students are asked regularly to write to Moodle-based forums; entries usually average a few paragraphs. Grade base: field exercise 20% digital collection/assessment 25%, Moodle exercise 25%, Final project/assessment 25% During the course of his career in academia and as a practitioner, Patrick Nunnally has specialized in researching, teaching, and managing projects that celebrate the multiple connections between people and the places they value. In addition to his public sector experience, Nunnally serves on the faculty of the University of Minnesota, teaching classes in landscape planning and urban studies, and coordinating the River Life Program through the Institute on the Environment. Documenting, preserving and celebrating the cultural heritage of the Upper Mississippi River and its valley has been the cornerstone of Nunnally’s work since the mid 1990s.

HSEM 3047V Honors Seminar: Music, Revolution, War
A-F only, 3 credit(s), max credits 6; prereq [Jr or sr] honors student; Meets CLE req of Writing Intensive
Instructor: Painter PhD, Karen
Description: HSem 3047V Music, Revolution, War We know that music expresses the most intimate and personal emotions. But it also connects us to and contributes to the most public and collective experiences. From Beethoven to Woodstock, from the French Revolution to the protests that brought down Communist regimes at the end of the 1980s, music has played a central role inspiring political and social change. In an even longer tradition, music has summoned soldiers to risk their lives, even as it likewise, whether in sacred ceremony or on the political stage, has inspired mass action in peace. This course will proceed historically, examining moments when revolution, ideological conflict, or war suggested vast changes were underway in society and culture, reflected in, but also instigated by music. Music’s powerful role raises important issues for all of who listen as well as create. Who determines its impact? Often the political message comes from the interpreter, be it a politician or musical interpreter, not just the musician or the composer. Still, the question remains, are artists responsible for the effect of what they produce and publish, regardless of their intentions? Furthermore, is there a particular effect music is likely to achieve: Furthermore, if music was capable of bringing about a particular effect, can the arts maintain their rule through the arts? Can the arts maintain their independence? What is the responsibility of the listener or amateur musician in a highly political environment? Class structure: discussion, with brief lectures (5-15 minutes) interpolated. Students will be responding to video excerpts of performances or film clips. Work load: 2-30 pages of reading per class, often a choice of readings. Reaction emails to the reading/class discussion every other week. One long paper (10-12), which will be submitted in stages, including one or more revisions. Karen Painter, associate professor in the School of Music, writes on the history of musical listening, especially in the context of ideology and social history. The framework for her research has involved early bourgeois musical culture, fin-de-siecle cultural debates, World War I, Austro-German socialism, and Nazism. Her publications have addressed a range of composers above all Mahler and Mozart, but also Wagner, Bruckner, Mahler, Schoenberg, Richard Strauss, Hindemith and Off. In 1999-2000 she lived in Berlin, as a recipient of Humboldt fellowship and the Berlin Prize. Painter and her husband, a law professor at the U, live in Edina with their three children, ages 4-7.

HSEM 3067H Honors Seminar: Digital Literacies
A-F only, 3 credit(s), max credits 6; prereq [Jr or sr] honors student
Instructor: Gurak PhD, Laura J
Description: HSem 3067H Digital Literacies Since the beginning of time, human communication has been influenced by technology, starting with the use of tools for cave paintings. In ancient Greece, Plato expressed concerns that the written word would influence how well people could memorize; later, the printing press shifted the power structures of who could own and disseminate information. More recently, tools from the telegraph to television and from the computer to wireless devices have continued to change the communication landscape. In each case, particular technologies engender a particular literacy, or way of communicating and knowing the world. Digital technologies in particular have had a particularly powerful effect, in a very short period of time, on how we relate to each other and how we create knowledge. Unlike the text-based world of printed books and newspapers, digital technologies are multi-modal (text, sound, visual) and tend to encourage short burst of ideas rather than long, sustained arguments. By way examining what we might call “digital literacies,” this class will introduce students to foundational research in the field of Internet studies but will quickly focus on digital technologies and the relationship of these technologies to reading and writing. The class will involve reading, discussion, some lecture, and a set of small observational research projects. Class structure: Discussion, in-class activities, creation of a podcast. Work load: Reading (one short book and several articles), hand-on activities, group projects, creation of a podcast. Professor Laura Gurak is chair of the College of Liberal Arts Department of Writing Studies. She received her PhD in Communication and Rhetoric from Rensselaer Polytechnic Institute. Her studies include the use of the internet and online communities, digital literacies, and internet-based research. She is also interested in how technology and science are communicated to the public and does work on technical writing and communication in science, health, and engineering fields. She is author of numerous articles and books including Cyberliteracy (Yale 2001) and The Concise Guide to Technical Communication (Pearson Longman).

Horticultural Science
305 Alderman Hall

HORT 1001 Plant Propagation
4 credit(s); Meets CLE req of Biological Sciences
Instructor: Michalas, Thomas E
Description: A lot of you who are consulting this course guide are probably looking for a lab ed biology credit and wondering whether this course will fit the bill. I’ll tell you a bit about the course, and then you can figure out whether it is a good fit for you. <P> First, a warning: I really enjoy teaching this course and I suppose I could be accused of being overenthusiastic. There’s something viral about this course that infects many students and you’ll catch it too. You’ll transform into a bit of a plant geek, excitedly describing cool things about plants to friends and family.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
growth and reproduction, and challenges you to apply these concepts in the greenhouse to hands-on plant propagation. By the end of the course, we expect that you will know how to describe plant parts and their cellular structures through illustrations and by using the language of biology (meaning there’s a lot of terminology). You will be able to recognize and document these plant parts and structures in the world around you and know examples of how they relate to your life. You will know how to use scientific ways of inquiry to investigate questions and how to make science-based decisions. You will know how to successfully propagate plants using several different methods. <p>Pay close attention to this next bit and make sure it is copacetic with your learning style: The lecture content for this course will be delivered primarily on-line through the use of audio, video, text and discussions hosted on WebVista and Moodle. You MUST have reliable internet access several times each week to access lecture materials and the capacity to listen to downloaded mp3 lecture companion podcasts. You MUST have weekly access to a rudimentary digital camera (it doesn’t have to be fancy), and the ability to upload to UThink blogs. The most important thing though is that you MUST have the self-discipline to set aside specific times every week to work through the online lecture material just as if you were going to a conventional lecture. <p>The labs have about 30 students in each section and are taught in a conventional, face-to-face format on the St. Paul campus in a great greenhouse facility. <p>You will also have a required face-to-face class meeting at 11:45am on your scheduled laboratory day if you are in a Tuesday or Thursday lab or held prior to your lab if you choose the Wednesday evening lab. The class meeting is also in St. Paul and is an opportunity for us to further explore the on-line lecture subjects, for exams and other learning activities. <p>Even though the lectures are on-line, the labs and class meetings provide a sense of community among instructors and students. <p>Click on the Course URL for more information, view a video and see examples of lectures and assignments. 

**Style:** 30% Laboratory, 10% Demonstration, 60% Web Based. Lectures are delivered on-line via WebVista and Moodle with mp3 lecture companion podcasts.

**Grading:** 37% mid exam, 10% final exam, 25% reports/papers, 10% quizzes, 10% written homework, 10% laboratory evaluation.

**Exams:** Reports and Papers are associated with the laboratory projects. These percentages are approximations to assist with your registration planning.

**Exam Format:** Multiple choice, matching, draw and label diagrams, short answer, brief essay. Final will be comprehensive. These formats are approximations to assist with your registration planning.

**HORT 1013 Floral Design**

3 credit(s);

**Instructor:** Anderson, Neil O.

**Description:** Floral design is a course to educate students in the creation of professional floral designs to enhance the human experience in a variety of occasions. Floral design is a prime example of a horticulture discipline which encompasses a wide range of subjects across the educational spectrum, such as physics, mechanical engineering, art, history, horticulture, landscape architecture, architecture, liberal arts, music, business, human ecology, food science, biology, botany, ecology, medicine, and mortuary science. Flowers have historically been used to express emotions; we will examine the historic uses of flowers in various civilizations for celebrating human life and death, as well as how these uses influence our current floral design spectrum. Additional features of flowers, such as fragrance, will demonstrate the sensory value of their use. Students from a diverse array of majors, professional interests, and rank across the university (undergraduate, continuing education, MAST, Master of Agriculture, graduate, Regent’s Scholars) enroll in Floral Design each year. Environmental Horticulture undergraduate students may enroll in this class to fulfill a Hort elective. The class is designed to allow you and your creative and artistic talents blossom as you learn to about the artistic use of flowers. It may be a welcome stress-reliever in your busy schedules. Additionally, depending on your professional background, this course will aid in enhancing your career in any field.

**Style:** 18% Lecture, 15% Discussion, 67% Laboratory.

**Grading:** 40% mid exam, 10% reports/papers, 5% quizzes, 45% laboratory evaluation.

**Exam Format:** T/F, essay, observational

**HORT 1015 Woody and Herbaceous Plants**

A-F only, 4 credit(s);

**Instructor:** Hokanson, Stan C

**Description:** Student may contact the instructor or department for information.

**HORT 1015 Woody and Herbaceous Plants**

A-F only, 4 credit(s);

**Instructor:** Hokanson, Stan C

**Description:** During this course you will master the skills that will allow you to identify plants from around the world. By the end of the term, you will have been introduced to a few hundred of the most important herbaceous and woody cultivated plants for northern climates. You will learn their distinguishing features for identification, common uses, cultural specificities, and notable cultivars. In addition to the regular class sessions, there will be one Saturday field trip during the term.

**Style:** 31% Lecture, 68% Laboratory.

**Grading:** 58% mid exam, 28% reports/papers, 14% quizzes.

**Exam Format:** fill in the blank, short answers

**HORT 1031 Vines and Wines:**

Introduction to Viticulture and Enology

**OPT No Aud, 3 credit(s); prereq 21 yrs of age by date of 1st class meeting;**

**Instructor:** Luby, James Joseph

**Description:** This course is an introduction to the principles of growing grapes (viticulture), making wine (enology), and an appreciation of the historical, geographical and sensory diversity of wine. The course is taught in part with 20 to 50 minute online lectures (Adobe Presenter) format. Usually 2 or 3 of these are covered each week. The class also meets one evening each week for a combination lecture/sensory session. There is one field trip to a local winery scheduled during the regular weekly class time. Upon completion of this course, each student will understand and have a working knowledge of the following concepts: 1. The process of fermentation and its role in wine production. 2. Fundamental principles of biology and culture of the grapevine. 3. Types of wine and their production differences. 4. The major grape-growing regions of the world, the most important grape cultivars in each region, and the characteristics of the wines produced in these regions. 5. Systematic evaluation of wine sensory characteristics. 6. Commercial wine labels and the information they provide. 7. The basic aspects of plant anatomy, using the grapevine as a model. 8. The major genetic factors in grapes that contribute to wine quality. 9. How cultural and environmental factors affect wine quality and yield. 10. Selection, planting, and cultivation of grapevines in a home garden. 11. Current issues involving wine and human health. 12. Current social and legal issues involving wine.

**Style:** 15% Lecture, 15% Discussion, 10% Small Group Activities, 5% Field Trips, 10% Guest Speakers, 40% Web Based.

**Grading:** 20% special projects, 56% quizzes, 16% written homework, 4% in-class presentation, 4% other evaluation.

**HORT 1061 The Sustainable Lawn**

3 credit(s);

**Instructor:** Watkins, Eric

**Description:** This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit “Class URL” for ODL policies, including fee and financial aid information. Millions of acres across the United States are
devoted to turfgrass. Home lawns, parks, athletic fields, golf course, and other turf areas play an important role in environmental quality. Homeowners have little knowledge about fertilizer and pest control, irrigation, and mowing. Although the impact of an individual homeowner may be small, the effect of millions of acres of home lawns can be significant. This course will focus on sustainable turfgrass management for the home lawn. The content will be presented in a fashion that focuses on environmentally responsible turfgrass management. The course will begin by presenting an overview of basic horticultural principles and then focus on turfgrass-specific topics. Lectures will provide information necessary for laboratory and discussion portions of the course. Students will learn how to identify common turfgrasses and then how to properly manage a home lawn in a sustainable way. The course will be presented entirely online and make extensive use of online discussion forums, wikis, blogs, and interactive Flash modules. Students will discuss important turfgrass science topics such as fertilizer run-off, pesticide use, and genetically-modified turf. This course will also equip students with the knowledge and tools necessary to maintain quality turf areas with reduced inputs, thereby reducing potential risk to the environment.

Style: 40% Lecture, 40% Discussion, 20% Laboratory.
Grading: 15% mid exam, 20% final exam, 10% reports/papers, 10% special projects, 10% quizzes, 5% in-class presentation, 10% class participation, 10% problem solving, lab work 10%

HORT 1905 Farm/Small Seminar
1-3 credit(s), max credits 3, 1 completion allowed; prereq Fr;
Instructor: Markhart III, Albert Henry
Description: This seminar will focus on local foods - where it comes from, who grow it, and the environmental implications for consumers. The class will provide students with unique content on our food system and the current and potential roles of local food production. As part of our time together, two field trips are required: one to the Minnesota Landscape Arboretum and the other as a service learning experience to the Dream for Wild Health organic farm with additional stops at the Minnesota Food Association CSA, Stillwater, and Pine Tree Apple Orchard. These experiential learning opportunities will be integrated with scholarly readings, to include Aldo Leopold?s A Fierce Green Fire, Sir Albert Howard?s An Agricultural Testament, Randal Beeman and James Pritchard?s A Green and Permanent Land, Clive Ponting?s A Green History of the World, Michael Pollan?s In Defense of Food, and Omnivores Dilemma, and Eliot Coleman?s The Four Season Harvest. In addition, parts of HORT 1905 will provide introductions to CFANS and University Services including career, counseling, and international programs. Small and large group discussions will focus on transition and life style issues that often face freshman students. Writing will be integrated in to this seminar, some of which will be edited and graded; other assignments will be formative to encourage student reflection and the development of ideas while at the same time encourage individual growth and adjustment to the university environment.
Style: 10% Lecture, 10% Film/Video, 40% Discussion, 10% Small Group Activities, 20% Field Trips, 10% Guest Speakers.
Grading: 10% reports/papers, 25% special projects, 10% attendance, 10% journal, 10% reflection paper, 35% class participation.

HORT 2031 Organic Food: How to Grow It, Where to Buy It, Can it Feed the World?
A-F only, 3 credit(s);
Instructor: Markhart III, Albert Henry
Description: If you want to be able to grow your own healthful food in an environmentally friendly garden, if you want to know if you should buy organic food in the grocery store, co-op, or farmer?s market, if you have ever wondered if organic/sustainable food can feed the world then consider taking this course taught by a distinguished teaching award winner and long time organic gardener. The course brings lectures, readings, trips to coops, and 'hands dirty' work on the Student Organic Farm to provide students with the ability to grow their own food, become informed consumers, and appreciate the role of organic food from the backyard and community gardens, to local vegetable farms and the potential to feed the world. This class is intended to meet the needs of anyone interested in the food they eat. The only pre-requisites are an inquisitive mind, curiosity about what they eat, and a willingness to get ones hands dirty.
Style: 70% Lecture, 10% Film/Video, 20% Small Group Activities.
Grading: 30% mid exam, 25% final exam, 10% reports/papers, 20% special projects, 10% attendance, 5% in-class presentation.

HORT 2100 Agricultural Biochemistry
A-F only, 3 credit(s); prereq CHEM 1011 or [1015, Concurrent registration is required (or allowed) in 1017] or CHEM 1021 or instr consent;
Instructor: Hegeman, Adrian D
Description: This course provides a fundamental chemical and biochemical foundation needed to master biotechnological topics as growing part of agricultural disciplines. Subject matter emphasizes qualitative understanding of key concepts in organic, analytical and biochemical chemistry with special emphasis on the chemistry, metabolism and development of plants.
Style: 100% Lecture.
Grading: 30% mid exam, 30% final exam, 30% quizzes, 10% attendance.
Exam Format: multiple choice and short answer

HORT 2061W Turfgrass Management
A-F only, 3 credit(s); prereq 1001 or instr consent; Meets CLE req of Writing Intensive;
Instructor: Watkins, Eric
Description: This course will focus on the basics of turfgrass management. Students will learn the basic principles of turfgrass growth and development, establishment, fertilization, mowing, cultivation, and irrigation. Students will also be trained in turfgrass species identification and common turfgrass management calculations.
Style: 45% Lecture, 15% Discussion, 20% Laboratory.
Grading: 20% mid exam, 15% final exam, 25% reports/papers, 10% special projects, 10% quizzes, 5% in-class presentation, 5% class participation, 10% laboratory evaluation.
Exam Format: short answer, essay

HORT 4061W Turfgrass Weed and Disease Science
A-F only, 3 credit(s); prereq 4061, PIPa 2001;
Instructor: Watkins, Eric
Description: Student may contact the instructor or department for information.

HORT 4061W Turfgrass Weed and Disease Science
A-F only, 3 credit(s); prereq 4061, PIPa 2001;
Instructor: Watkins, Eric
Description: The purpose of this course is to familiarize students with turfgrass weed and disease problems and provide them with the knowledge to deal with these problems using an integrated approach. Students will learn the biology, identifying features, and management strategies for several important turfgrass diseases and weeds. Students will also learn how to
apply IPM principles to turfgrass weed and disease problems.

**Style:** 25% Lecture, 25% Discussion, 50% Laboratory.

**Grading:** 15% mid exam, 15% final exam, 25% reports/papers, 10% quizzes, 5% in-class presentation, 5% class participation, 20% laboratory evaluation, 5% problem solving.

**Exam Format:** short answer, essay

**HORT 4071W Applications of Biotechnology to Plant Improvement**

4 credit(s); prereq [Bioi 1009 or equiv or grad student], instr consent; Meets CLE req of Writing Intensive; Instructor: Smith, Alan G

**Description:** Student may contact the instructor or department for information.

**HORT 4096W Professional Experience Program: Internship**

S-N only, 2 credit(s); max credits 2; prereq CFANS undergrad, completed internship contract prior to employment; Instructor: STAFF

**Description:** This course provides an opportunity for professional experience in horticulture businesses, government agencies, arboreta, and botanical gardens achieved through a supervised practical experience. Must work a minimum of 250 hours. Hort 4096 may be repeated once for a total of 2 credits. Credit for the internship will only be granted after successful completion of one of the following projects: A. Write a 4-5 page paper detailing your internship experience. The focus of the paper should be determined in consultation with your advisor. B. Present a public seminar on your internship. C. Publish a webpage about your internship.

**Grading:** S/N only

**HORT 4096W Professional Experience Program: Internship**

S-N only, 2 credit(s); prereq CFANS undergrad; Meets CLE req of Writing Intensive; Instructor: Watkins, Eric

**Description:** This course provides an opportunity for professional experience in horticulture businesses, government agencies, arboreta, and botanical gardens achieved through a supervised practical experience. Students will also produce a final publication that is focused on writing for lay audiences. This writing project will start just before the internship begins and end approximately two months after the internship is complete. The writing component of the course will be taught in an online format. Hort 4096W may not be repeated

**HORT 4141W Plant Production I**

A-F only, 4 credit(s); prereq 1001 or 1015 or instr consent; Meets CLE req of Writing Intensive; Instructor: Gillman, Jeffrey Hayes

**Description:** This course will cover the basics of nursery production including such things as irrigation, fertilization and soil management. Other topics that will be discussed include propagation, unique growing systems, and others.

**Style:** 50% Lecture, 25% Discussion, 25% Laboratory.

**Exam Format:** multiple choice and essay

**HORT 4461 Horticultural Marketing**

A-F only, 3 credit(s); prereq APEC 1101 or ECON 1101; Credit will not be granted if credit has been received for: APEC 4461

**Instructor:** Yue, Chengyan

**Description:** This course examines several major areas in horticultural marketing. First, we will introduce the difference between horticultural products and commercial commodities and what’s special about horticultural marketing; Second, we analyze the functions performed by the horticultural marketing system. We analyze the marketing behavior of horticultural businesses (farms, wholesalers, garden centers) and cover the core marketing components that should be used by every small horticultural business; Finally, the basic approaches of consumer research (survey techniques, and non-hypothetical experimental approaches, etc.) will be introduced. The recommended textbook is Solomon, Michael R. and Elnora Stuart. 2003. Marketing: Real People, Real Choices, 3rd Ed. This course will consist of lectures, discussions, and student projects and presentations. Students will work on the projects in small group teams of three or four. The target audience is undergraduate students and master of agriculture students.

**Style:** 60% Lecture, 40% Discussion.

**Grading:** 30% mid exam, 20% final exam, 15% reports/papers, 10% quizzes, 20% in-class presentation, 5% class participation.

**Exam Format:** Multiple choice and short answer questions.

**HORT 5031 Organic Viticulture and Fruit Production**

A-F only, 3 credit(s); prereq [1001, 3005] or instr consent; Instructor: Hoover, Emily E.

**Description:** This course will cover principles of production of temperate-zone fruit crops focusing primarily on grapes, apples and berries. Topics covered will include site selection, disease, pest and weed management, cultivar selection, pruning and training systems, and post-harvest considerations. The course will include two Saturday field trips with visits to several local vineyards and orchards.

**Style:** 40% Lecture, 40% Discussion. field trips

**Grading:** 30% reports/papers, 10% in-class presentation, 10% class participation, 50% problem solving.

**HORT 5031 Organic Viticulture and Fruit Production**

A-F only, 3 credit(s); prereq [1001, 3005] or instr consent; Instructor: Luby, James Joseph

**Description:** This course will cover principles of production of temperate-zone fruit crops focusing primarily on grapes, apples and berries. Topics covered will include site selection, disease, pest and weed management, cultivar selection, pruning and training systems, and post-harvest considerations. The course will include two Saturday field trips with visits to several local vineyards and orchards.

**Style:** 40% Lecture, 40% Discussion. field trips

**Grading:** 30% reports/papers, 10% in-class presentation, 10% class participation, 50% problem solving.

**HORT 5071 Restoration and Reclamation Ecology**

4 credit(s); prereq [One college course in ecology, one college course in [plant science or botany]] or instr consent ; Instructor: Galatowitsch, Susan M

**Description:** Ecological and physiological concepts are explored as a basis for regenerating grasslands, wetlands, forests and other landscapes. The extent to which restorations have succeeded or failed is often a reflection of the state of our understanding of ecological processes. Half of the course introduces students to the ecological and physiologic concepts relevant to land restoration and reclamation. Readings from the primary literature are used to illustrate how restoration and reclamation efforts apply an ecological and/or physiological concept. Students discuss the extent to which land restoration and reclamation. Readings from the primary literature are used to illustrate how restoration and reclamation efforts apply an ecological and/or physiologic concept. Students discuss the extent to which land restoration has depended on scientific predictions vs. trial and error to develop cultural practices. The other half of the course provides students with and in-depth view of the restoration of specific kinds of ecological communities. For each ecommunity, students are provided with information on the history of restoration, the impetus for restorations (cultural, political), and the range of restoration practices and desired outcomes, and major limitations to success. Field visits are scheduled for the first half of the course.

**Style:** 60% Lecture, 20% Discussion, 20% Laboratory.

**Grading:** 30% mid exam, 40% final exam, 30% reports/papers.

**Exam Format:** MC and essay

**HORT 5090 Directed Studies**

1-6 credit(s), max credits 18, 18 completions allowed; prereq 8 or upper div Hort courses, instr consent ; Instructor: STAFF

**Description:** Opportunities for in-depth exploration of concepts, technology, materials, or programs in specific areas to expand professional competency and self-confidence. Planning, organizing, implementing, and evaluating knowledge obtained
HORT 6002 Problem Solving in Horticulture
S-N only, 2-4 credit(s), max credits 4, 1 completion allowed; prereq Completion of 18 cr in master of agriculture in horticulture program or instr consent ;
Instructor: Michaels,Thomas E
Description: This course is a collaborative problem-solving experience, designed and completed by the students with guidance from a faculty instructor. The purpose is to expose students to real-world problems in horticulture, have them identify the main biological, design and social and business sustainability issues related to the problems, and to develop solutions as an interdisciplinary team of 2-4 scholars to address these problems. Students will identify a research problem in consultation with the faculty and a public or private sector organization involved in a facet of horticulture. Students will apply principles and methodologies they learned from coursework and their prior professional experience to address the problem. This may involve a mix of empirical research methods from the horticulture and other natural and social sciences, design and business analyses, as well as concepts and methods of societal delivery and policy analysis
Style: Initially as weekly meetings for 3 hours to plan and start-up the research, then agreed-upon schedule
Grading: The course grade will be based on a portfolio document and presentation prepared as a public seminar. Students will describe the contributions of each group member to development of the final portfolio.

HORT 6003 Masters of Professional Studies in Horticulture
Professional Experience Program: Internship
S-N only, 1-3 credit(s), max credits 6; prereq Masters of professional studies in horticulture student, completed internship contract, instr consent ;
Instructor: Michaels,Thomas E
Description: Student may contact the instructor or department for information.

HORT 6011 Plant Propagation
A-F only, 4 credit(s); prereq Master of Professional Studies or instr consent ;
Instructor: Michaels,Thomas E
Description: Student may contact the instructor or department for information.

HORT 8007 Extension Horticulture Practicum
1-5 credit(s), max credits 5, 1 completion allowed; prereq 9 grad cr in [ag or bio] science, instr consent ;
Instructor: Luby,James Joseph
Description: Student may contact the instructor or department for information.

HORT 8090 Graduate Horticultural Research
1-12 credit(s), max credits 18, 18 completions allowed; prereq instr consent ;
Instructor: Luby,James Joseph
Description: Student may contact the instructor or department for information.

HORT 8270 Graduate Seminar
A-F only, 1 credit(s); prereq Grad major in [hort or applied plant sciences or ent or agro or plnt brdg or plnt path or soil] or instr consent; Credit will not be granted if credit has been received for: AGRO 8270;
Instructor: Wyse,Donald L
Description: Student may contact the instructor or department for information.

Housing Studies
240 McNeal Hall

HSG 2196 Work Experience in Housing Studies
S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent ;
Instructor: Ziebarth,Ann
Description: Student may contact the instructor or department for information.

HSG 2196 Work Experience in Housing Studies
S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent ;
Instructor: Crump,Jeffrey R
Description: Student may contact the instructor or department for information.

HSG 2196 Work Experience in Housing Studies
S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent ;
Instructor: Crump,Jeffrey R
Description: Student may contact the instructor or department for information.

HSG 2401 Introduction to Housing
A-F only, 3 credit(s); prereq credit will not be granted if credit already received for: DHA 2401;
Instructor: Ziebarth,Ann
Description: Housing is more than "protection from the elements". House and home have social, economic and psychological implications. This course is designed to develop an understanding of and appreciation for the complexity of housing. The goal is to familiarize you with housing as a process and a product in the context of the individual, the family, and the community. Topics addressed include: an introduction to housing studies, architectural styles and preferences, residential construction methods and components, housing finance (buying a home), housing markets, social and psychological aspects of home, and government laws, policies, and regulations. This course is designed for undergraduates, but is open to anyone. Students who are Housing Studies majors and those seeking a
minor in Housing Studies are required to complete this course as part of the program core. The course will be web enhanced with a web Vista page that is available to registered students.

**Style:** 75% Lecture, 20% Discussion, 5% in-class activities

**Grading:** 25% mid exam, 25% final exam, 40% written homework, 10% class participation.

**Exam Format:** essay, short answer, some multiple choice, problem solving

**HSG 2463 Housing and Community Development**

- **A-F only, 3 credit(s); prereq credit will not be granted if credit already received for: DHA 2463;**
- **Instructor:** Crump, Jeffrey R
- **Description:** This course is an examination of the linkages between housing and community development. The process of residential neighborhood change and the impact of housing on neighborhood conditions will also be explored. The course considers theories of neighborhood change, trends in residential development, and ideas of community building. Private sector, community-based, and governmental efforts at neighborhood revitalization and their effectiveness will be studied. Related issues such as racial discrimination in housing, gentrification and the displacement of low-income residents will be surveyed. This course also incorporates a community-based learning component. Specific course goals include: 1. Develop an understanding of linkages between housing and the broader community. 2. Develop an appreciation of the linkages between housing and quality of life. 3. Develop an awareness of the connections between housing and social justice.
- **Style:** 40% Lecture, 20% Discussion. Community based learning
- **Grading:** 20% final exam, 30% quizzes, 10% class participation, 40% other evaluation. Community based learning
- **Exam Format:** Essay

**HSG 4150H Honors Capstone Project**

- **A-F only, 2 credit(s), max credits 4; prereq Housing studies honors;**
- **Instructor:** Ziebarth, Ann
- **Description:** Student may contact the instructor or department for information.

**HSG 4150H Honors Capstone Project**

- **A-F only, 2 credit(s), max credits 4; prereq Housing studies honors;**
- **Instructor:** Angell, William J
- **Description:** Student may contact the instructor or department for information.

**HSG 4150H Honors Capstone Project**

- **A-F only, 2 credit(s), max credits 4; prereq Housing studies honors;**
- **Instructor:** Crump, Jeffrey R
- **Description:** Student may contact the instructor or department for information.

**HSG 4150H Honors Capstone Project**

- **A-F only, 2 credit(s), max credits 4; prereq Housing studies honors;**
- **Instructor:** Bruin, Marilyn J
- **Description:** Student may contact the instructor or department for information.

**HSG 4193 Directed Study in Housing Studies**

- **A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;**
- **Instructor:** Ziebarth, Ann
- **Description:** Student may contact the instructor or department for information.

**HSG 4193 Directed Study in Housing Studies**

- **A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;**
- **Instructor:** Angell, William J
- **Description:** Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
HSG 5193 Directed Study in Housing Studies
A-F only, 1-4 credit(s), max credits 8; prereq Jr or sr or grad student;
Instructor: Crump, Jeffrey R
Description: Student may contact the instructor or department for information.

HSG 5193 Directed Study in Housing Studies
A-F only, 1-4 credit(s), max credits 8; prereq Jr or sr or grad student;
Instructor: Bruin, Marilyn J
Description: Student may contact the instructor or department for information.

HSG 5471 Housing Studies Certificate Seminar
A-F only, 2 credit(s); prereq Admitted to Housing Studies Certificate Program
Credit will not be granted if credit already received for: DHA 5471;
Instructor: Ziebarth, Ann
Description: Student may contact the instructor or department for information.

HSG 5481 Promoting Independence in Housing and Community
A-F only, 3 credit(s); prereq [[2401 or DHA 2401], [j or sr or grad student]) or instr consent
credit will not be granted if credit already received for: DHA 5481;
Instructor: STAFF
Description: This course is an interdisciplinary seminar in the study of supportive housing across the lifespan. Particular emphasis will be on housing needs of children, older adults, and persons with disabilities. We will examine the ways in which housing facilitates or inhibits the quality of life for persons with special needs. With the instructor's permission this course is open to any interested person. It is designed for upper division undergraduates, Housing Studies Certificate students and students in DHA graduate programs with a housing studies emphasis.
Style: 80% Lecture, 15% Discussion. site visits, guest speakers
Grading: 20% mid exam, 20% final exam, 50% special projects, 10% other evaluation. in class activities, group assignments
Exam Format: essay

HSG 8192 Readings in Housing Studies
A-F only, 3 credit(s), max credits 8, 8 completions allowed;
prereq instr consent ;
Instructor: Ziebarth, Ann
Description: Student may contact the instructor or department for information.

HSG 8192 Readings in Housing Studies
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed;
prereq instr consent ;
Instructor: Angell, William J
Description: Student may contact the instructor or department for information.

HSG 8192 Readings in Housing Studies
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed;
prereq instr consent ;
Instructor: Crump, Jeffrey R
Description: Student may contact the instructor or department for information.

HSG 8193 Directed Study
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed;
prereq instr consent ;
Instructor: Angell, William J
Description: Student may contact the instructor or department for information.

HSG 8193 Directed Study
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed;
prereq instr consent ;
Instructor: Crump, Jeffrey R
Description: Student may contact the instructor or department for information.

HSG 8193 Directed Study
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed;
prereq instr consent ;
Instructor: Bruin, Marilyn J
Description: Student may contact the instructor or department for information.

HSG 8193 Directed Study
S-N only, 3 credit(s); prereq [DHA or design master's]
student, instr consent ;
Instructor: Ziebarth, Ann
Description: Student may contact the instructor or department for information.

HUMF 5001 Foundations of Human Factors/Ergonomics
A-F only, 3 credit(s); prereq Enrollment in good standing, grad HumF minor; Credit will not be granted if credit has been received for: KIN 5001;
Instructor: Smith, Thomas J
Description: The course will address these issues in the following contexts: Consumer Product Design; Cognitive Performance and Learning; Psychomotor Performance, Behavioral Cybernetics of Human Performance; Effects of Perturbed Sensory Feedback on Performance; Machine and Tool Performance; Interactive Performance with Complex...
Human Resources and Industrial Relations
3-300 Carlson School of Management

HRIR 3051 Compensation: Theory and Practice
A-F only, 3 credit(s); prereq [[At least 60 sem cr or 75 qtr cr], 2.00 GPA] or dept consent;
Instructor: STAFF
Description: Introduction to compensation/reward programs in employing organizations. Theories of organizational/employee behavior used in design/implementation of pay programs. Design, implementation, and evaluation of job evaluation, salary surveys, skill-based pay, merit-based pay, and other compensation programs.

Humanities
831 Heller Hall

HUM 1431 Introduction to Philosophy
A-F only, 3 credit(s), max credits 6; prereq Only Rochester-admitted students will be able to enroll in this course.; Meets CLE req of Arts/Humanities;
Instructor: Bamford, Rebecca
Description: Student may contact the instructor or department for information.

HUM 1433 Introduction to Literature
A-F only, 3 credit(s); Meets CLE req of Literature;
Instructor: Nichols, Marcia Dawn
Description: Student may contact the instructor or department for information.

Industrial Engineering
125 Mechanical Engineering

IE 4521 Statistics, Quality, and Reliability
4 credit(s); prereq Upper div or grad student or CNR;
Instructor: Fiedler, Corrinne (Corrie)
Description: Student may contact the instructor or department for information.

IE 4521 Statistics, Quality, and Reliability
4 credit(s); prereq Upper Div or grad student or CNR;
Instructor: Arora, Sant R
Description: Student may contact the instructor or department for information.

IE 5111 Systems Engineering I
A-F only, 2 credit(s); prereq CSE upper div or grad student;
Instructor: Monson, Robert James
Description:

IE 5112 Introduction to Operations Research
A-F only, 3 credit(s); prereq [Math 2243 or Math 2373 or equiv], [one semester of probability or statistics], [CSE

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IE 5441 Financial Decision Making
A-F only, 4 credit(s); prerequisite IT upper div or grad student
CSE upper div or grad student;
Instructor: STAFF
Description: To train students to become better problem solvers, appreciate the importance of cost and revenue estimates, and inputs. To actively seek opportunities to improve customer satisfaction and reduce costs. Subject matter: (1) Financial Accounting - Preparation of financial statements to generate information for users external to the organization according to the prescribed rules and conventions. Accounting for inventories: Plants, equipment depreciations, Accounts Receivables; liabilities, Stockholders' equity, cash flow statements, and analysis of financial statements. (2) Time Value of Money - Collapsing the time element in the cashflow of inputs and outputs for various alternatives: Elementary exposure how to handle risk, the material is not covered in the textbook. Supplementary reading material will be prescribed. (3) Managerial Accounting (Chapters 15-24) Accounting for management and control of service and government operations. Topics of job casting, process costing, activity based costing, activity based management, standard costing and variance accounts, responsibility accounting, transfer prices, performance evaluation, operational and capital budgeting. The focus is to improve problem solving and decision making capabilities to improve productivity, profitability for the firm and improve value to the customer through improving value chain integration reducing quality losses and through business process reengineering.
Style: 60% Lecture, 10% Discussion, problem solving
Grading: 40% mid exam, 60% final exam
Exam Format: problems; The final exam will be comprehensive with an 80% weight to management accounting. Homework is assigned in the class.

IE 5511 Human Factors and Work Analysis
A-F only, 4 credit(s); prerequisite Upper div CSE or grad student;
Credit will not be granted if credit has been received for:
HUMF 5211;
Instructor: Hayes, Caroline
Description: Student may contact the instructor or department for information.

IE 5513 Engineering Safety
A-F only, 4 credit(s); prerequisite Upper div CSE or grad student;
Instructor: Patton, Richard
Description: Student may contact the instructor or department for information.

IE 5531 Engineering Optimization I
4 credit(s); prerequisite Upper div or grad student or CNR;
Instructor: Carlsson, John
Description: Student may contact the instructor or department for information.

IE 5541 Project Management
4 credit(s); prerequisite Upper div or grad student;
Instructor: Schaller, Robin
Description: Student may contact the instructor or department for information.

IE 8532 Stochastic Processes and Queuing Systems
4 credit(s); prerequisite 4521 or equiv;
Instructor: Cooper, William
Description: Student may contact the instructor or department for information.

IE 8773 Graduate Seminar
S-N only, 1 credit(s);
Instructor: Gupta, Diwakar
Description: Student may contact the instructor or department for information.

IE 8774 Graduate Seminar
S-N only, 1 credit(s); prerequisite 8773;
Instructor: Gupta, Diwakar
Description: Student may contact the instructor or department for information.

IE 8794 Industrial Engineering Research
1-6 credit(s), max credits 10, 10 completions allowed; prerequisite instr consent;
Instructor: Benjaafar, Say
Description: Student may contact the instructor or department for information.

Information Networking
20 Classroom Office Building

INET 3065 Computer Security for the Non-IT Professional
3 credit(s); prerequisite Basic computer/internet navigation skills, laptop with minimum 2GB ram/DVD player/Windows XP;
Instructor: Estrem, Le Allian
Description: Fundamental concepts of computer security without technical jargon. Real-world examples and issues. Practices for safe, secure and ethical computer use: virus, worms and malware detection and elimination; antivirus and firewall selection; secure Internet purchasing; using social networking sites; web page set-up.

INET 3101 C Programming: Language and Applications
A-F only, 2 credit(s); prerequisite Programming experience or completed coursework in [Java or C++ or similar programming language];
Instructor: Langanki, Mark
Description: The C programming language has a long history. C remains one of the most powerful languages available today and is at the foundation of many operating systems. This course covers past and present use of the C language, C syntax, libraries, memory management, File I/O (file and socket), modularity, ways other languages use C to interact with an operating system, debugging, and guidelines for how and where to use C instead of other languages. The course also provides an overall approach to software development that uses an adaptive model for well-designed and well-written code in any language-code that is elegant, powerful, and easy to understand. This model assists developers in logically breaking programs into "atomic" parts that can be built upon, modularized, and eventually easily tested when brought together in a program. The concept of "programming styles" will also be introduced, helping students decide which style will work best for them. Upon course completion, students will be able to - Code, compile and link C programs - Use and create C libraries - Debug C applications - Understand appropriate application of the C language. Group assignments will use real-world examples of appropriate use of C. Hands-on exercises will start with writing some simple UNIX/Linux shell commands in C, and then move into larger programs. Linux-based Ubuntu (http://www.ubuntu.com) or Knoppix (http://www.knoppix.org) are the free downloadable operating systems of choice for the class, and are bootable from CD/DVD.

INET 4011 Network Administration
A-F only, 4 credit(s); prerequisite CSci 4211 or instr consent;
Instructor: Hilditch, Bruce
Description: This course combines theory (lecture and expert guest speakers) and application (labs). Topics include network architecture, switching, routing, algorithms, protocols, infrastructure hardware, cable plant, security and network management.

INET 4032 Storage Design and Administration
A-F only, 2 credit(s);
Instructor: Follstad, Carl
Description: In today's "data explosion," managing data presents a challenge for organizations of all sizes. Basics of data management -- storage, protection and encryption -- as well as advanced topics of disaster recovery and business continuity are presented. Lectures will leverage case studies of local companies and how they are architecting their operations in unconventional ways to manage and protect terabytes of data. Students will learn how to apply storage industry best practices to solve everyday IT and business problems. Legal issues regarding data storage and retention, cutting-edge data storage products emerging into mainstream use, and "personal" data management and protection will also be discussed.

INET 4041 Emerging Network Technologies and Applications
A-F only, 3 credit(s); prereq [CSCI 4211 or equiv professional experience or instr consent ]; 45 cr;
Instructor: Dunn, Lawrence

INET 4061 Introduction to Data Warehousing
A-F only, 3 credit(s); prereq [4707 or CSCI 4707 or instr consent ]; laptop;
Instructor: Splett, Katherine Anna
Description: Design strategies for business analytics solutions: Business case studies, data mining and OLAP dimensional data models, warehouse architectures, ETL processes, physical design, and administration. Includes hands-on labs with SQL Server 2005.

INET 4153 Policy and Regulation: Effects on Global IT Infrastructure
A-F only, 3 credit(s); prereq 45 sem cr, experience with Windows/Internet;
Instructor: Hedblom, Mildred Kusler

INET 4193 Directed Study
A-F only, 1-4 credit(s), max credits 12, 4 completions allowed; prereq IITI student, dept consent ;
Instructor: STAFF
Description: Independent project, topic arranged with and supervised by IITI faculty.

INET 4709 Database Administration
A-F only, 2 credit(s); prereq [(4707 or CSCI 4707, CSCI 4061) or professional experience with SQL and basic operating systems];
Instructor: Onkka, Daniel Charles
Description: Basics of database administration. Planning, administration, backup and restore, security, monitoring, availability, replication, and scalability.

Description: Student may contact the instructor or department for information.

ISE 5503 Financial Management in Public Organizations
A-F only, 2 credit(s); prereq ISE student;
Instructor: Waldron, Craig Lemont
Description: Student may contact the instructor or department for information.

ISE 5504 Construction Law and Ethics
A-F only, 2 credit(s); prereq ISE student;
Instructor: Mackay, Deborah
Description: Student may contact the instructor or department for information.

ISE 6105 Capstone Project
A-F only, 1-2 credit(s), max credits 3; prereq ISE student;
Instructor: Volier, Vaughan Richard
Description: Student may contact the instructor or department for information.

Innovation Studies
20 Classroom Office Building

IS 5001 Introduction to Innovation Studies
A-F only, 1-4 credit(s), max credits 4, 3 completions allowed; prereq dept consent ;
Instructor: Tomsyck, John Peter
Description: -<b>Introduction to Innovation</b>- This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Presents key Innovation Studies models and demonstrates how these models support individualized learning and leadership processes while being broadly based dynamic and collaborative. The models contribute to innovative self and team leadership strategies, define and apply just-in-time knowledge, and support lifelong self-improvement skills.
Style: 100% Web Based.
Grading: -40% reports/papers. -Weekly discussions on readings (12%) -Weekly discussions on Web sites (12%) -10 innovation simulations (10%) -12 skills exercises (12%) -14 evaluations (14%)

IS 5002 Final Project for Innovation Studies
A-F only, 1-4 credit(s), max credits 4, 4 completions allowed; prereq Completion of IS requirements, dept consent ;
Instructor: Harkins, Arthur M
Description: The Final Project must have an applied, field-based dimension, and may be undertaken in one of two ways: (1) as an internship in an organization such as a business, school, government agency, nonprofit or community group, or (2) as a hands-on study project that sheds light on a contemporary issue or problem. Section 001 is for initial preparation of the Final Project.

IS 5100 Innovation Studies Seminar
A-F only, 3 credit(s), max credits 24, 24 completions allowed; prereq dept consent ;
Instructor: Dikel, William Robert
Description: Student may contact the instructor or department for information.

IS 5100 Innovation Studies Seminar
A-F only, 2 credit(s), max credits 24, 24 completions allowed; prereq dept consent ;
Instructor: Manning, Christie
Description: Student may contact the instructor or department for information.

IS 5100 Innovation Studies Seminar
A-F only, 2 credit(s), max credits 24, 24 completions
Schedule.

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### Insurance and Risk Management

#### 3-122 Carlson School of Management

**INS 4101 Employee Benefits**

- 2 credit(s); prereq 4100 or 5100 or HRIR 3021 or instr consent credit will not be granted if credit received for: 5101;

- Instructor: STAFF

**Description:** Design/administration of employee benefit plans as a component of total compensation: health insurance, disability plans, life insurance, salary reduction/deferred compensation programs/retirement plans—from social insurance to executive benefits. Alternative funding methods, including, self-insurance. Ethical issues, legal liability, compliance with regulations. Students learn to serve as consultants applying employee benefits to a live company. Practicing professionals and faculty address the class and assist students.

**Style:** 70% Lecture, 15% Discussion, 15% Student Presentation.

**Grading:** 15% reports/papers, 50% quizzes, 20% in-class presentation, 15% class participation.

**Exam Format:** multiple choice and essay

**INS 4201 Personal Financial Management**

- 2 credit(s); prereq credit will not be granted if credit received for: 5201;

- Instructor: STAFF

**Description:** Guest industry practitioners present the concepts and principles of personal financial planning, and you develop your own plan using computer software. Your plan and practitioners cover steps in the planning process, financial statements, expenditure and credit/debt management, time value of money, insurance (disability, health, liability, long-term care), investing and portfolio allocation, tax reduction, retirement plans and estate planning. Standards of professional conduct and regulation of financial planners are reviewed.

**Style:** 70% Lecture, 30% Discussion.

**Grading:** 60% reports/papers, 25% quizzes, 15% class participation.

**Exam Format:** multiple choice and essay

### Inter-College Program

#### 20 Classroom Office Building

**ICP 3000 Career Skills in the Professional Environment**

- 2 credit(s); prereq 50 cr;

- Instructor: Bonderson,Lori

**Description:** This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policy, fee, and financial aid restrictions. This course is designed to introduce you to the nuts and bolts of job search strategies, including resume writing, interviewing, working, and the use of technology and the Internet in job seeking.

**Style:** Online

**Grading:** 25% special projects; -Self-Introduction (12%) -Cover Letter (10%) -Resume (10%) -Networking Assignment (10%) -Career Center Visit (10%) -Course Project: Progress Report (3%) -Company Research (10%) -Interview Preparation (10%)

**ICP 3001W Introduction to Multidisciplinary Studies**

- A-F only, 3 credit(s); prereq Admitted to ICP Multidisciplinary Studies; Meets CLE req of Writing

- Instructor: Borowicz,Josh

**Description:** This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policy, fee, and financial aid information. This course is designed for returning adult students admitted to the Inter-College Program’s Multidisciplinary Studies degree option. It is also appropriate for prospective Multidisciplinary Studies (MdS) students and select others who may be interested in an individualized degree, but not sure which one. ICP 3001W reintroduces you to baccalaureate study at a university, one that is both a major research and a land-grant institution—the University of Minnesota. Readings, quizzes and exams, writing assignments, and online class work will prompt both reflective and synthetic thinking appropriate to individualized education.

**Style:** 100% Web Based.

**Grading:** - 10 quizzes and 2 proctored (not online) exams (25%)

- 15 online discussions and various other activities (20%)

- Academic Journal assignments (11.2%)

- Educational Autobiography (40%)

- Extra Credit (3.8%)

**ICP 3093 Directed Study**

- 1-15 credit(s); max credits 15, 1 completion allowed; prereq instr consent

- Instructor: STAFF

**Description:**

### Interdepartmental Study

#### 135 Johnston Hall

**ID 1201 Major and Career Exploration**

- 2 credit(s); prereq Fr or soph;

- Instructor: Bolte,Mia M

**Description:** Are you undecided about which major to choose? Or are you wondering what careers you can pursue with your major? In this class you'll learn about the foundations of career planning in relation to your interests. The course covers two main subjects: * Self-Assessment: Learn more about your skills, values, interests, and personality. * Exploring Options: Learn about majors available at the U, and how you can use your major to find a career you'll enjoy. We'll also introduce you to many of the resources available on campus, and help you explore the ways internships, community service, work experience, and travel can impact your future success. A $30 fee will be charged for career assessment inventories. Grading/Workload: Grades are determined based on student participation in class, 3-4 papers/projects, and other reaction papers as determined by the
ID 1201 Major and Career Exploration
2 credit(s); prereq Fr or soph;
Instructor: Timmins, Paul
Description: Are you undecided about which major to choose? Or are you wondering what careers you can pursue with your major? In this class you’ll learn about the foundations of career planning in relation to your interests. The course covers two main subjects: * Self-Assessment: Learn more about your skills, values, interests, and personality. * Exploring Options: Learn about majors available at the U, and how you can use your major to find a career you’ll enjoy. We’ll also introduce you to many of the resources available on campus, and help you explore the ways internships, community service, work experience, and travel can impact your future success. A $30 fee will be charged for career assessment inventories. Grading/Workload: Grades are determined based on student participation in class, 3-4 papers/projects, and other reaction papers as determined by the instructor. There are no exams in this course. An average of 25 pages of reading will be required each week.

ID 1201 Major and Career Exploration
2 credit(s); prereq Fr or soph;
Instructor: Whitney, AngiE Schmidt
Description: Are you undecided about which major to choose? Or are you wondering what careers you can pursue with your major? In this class you’ll learn about the foundations of career planning in relation to your interests. The course covers two main subjects: * Self-Assessment: Learn more about your skills, values, interests, and personality. * Exploring Options: Learn about majors available at the U, and how you can use your major to find a career you’ll enjoy. We’ll also introduce you to many of the resources available on campus, and help you explore the ways internships, community service, work experience, and travel can impact your future success. A $30 fee will be charged for career assessment inventories. Grading/Workload: Grades are determined based on student participation in class, 3-4 papers/projects, and other reaction papers as determined by the instructor. There are no exams in this course. An average of 25 pages of reading will be required each week.

ID 1201 Major and Career Exploration
2 credit(s); prereq Fr or soph;
Instructor: Buckley, Christopher Gene
Description: Are you undecided about which major to choose? Or are you wondering what careers you can pursue with your major? In this class you’ll learn about the foundations of career planning in relation to your interests. The course covers two main subjects: * Self-Assessment: Learn more about your skills, values, interests, and personality. * Exploring Options: Learn about majors available at the U, and how you can use your major to find a career you’ll enjoy. We’ll also introduce you to many of the resources available on campus, and help you explore the ways internships, community service, work experience, and travel can impact your future success. A $30 fee will be charged for career assessment inventories. Grading/Workload: Grades are determined based on student participation in class, 3-4 papers/projects, and other reaction papers as determined by the instructor. There are no exams in this course. An average of 25 pages of reading will be required each week.

ID 1201 Major and Career Exploration
2 credit(s); prereq Fr or soph;
Instructor: Halverson, Joyce A
Description: Are you undecided about which major to choose? Or are you wondering what careers you can pursue with your major? In this class you’ll learn about the foundations of career planning in relation to your interests. The course covers two main subjects: * Self-Assessment: Learn more about your skills, values, interests, and personality. * Exploring Options: Learn about majors available at the U, and how you can use your major to find a career you’ll enjoy. We’ll also introduce you to many of the resources available on campus, and help you explore the ways internships, community service, work experience, and travel can impact your future success. A $30 fee will be charged for career assessment inventories. Grading/Workload: Grades are determined based on student participation in class, 3-4 papers/projects, and other reaction papers as determined by the instructor. There are no exams in this course. An average of 25 pages of reading will be required each week.

ID 3201 Career Planning
2 credit(s);
Instructor: Untiedt, Paul
Description: Wondering what you’ll do after graduation? This course provides a practical introduction to integrating career-search strategies with your talents, values, interests and experience. Emphasis is on understanding the marketplace, online research, strategic resume writing, networking, and interviewing. A $40 fee will be charged for career assessment inventories. Grading/Workload: Grades are determined based on student participation in class, 3-4 papers/projects, and other reaction papers as determined by the instructor. There are no exams in this course. An average of 25 pages of reading will be required each week.

ID 3571 Metro Urban Studies Term: Contested Theories of Poverty, Inequality, and Social Change
4 credit(s); prereq Concurrent registration is required (or allowed) in 3572, 3573, dept consent; Meets CLE req of Social Sciences
Instructor: Holliday, David Wallace
Description: In the Metro Urban Studies Term students actively delve into major challenges of our time: poverty, inequality and social change. Connecting these issues is at the core of the program. Instead of just learning about these problems in the classroom, students actively explore solutions and become engaged in organization committed to social transformation. This program focuses on learning the basics of organizing in communities and workplaces, how to persuade others to become critically engaged, and how to be an effective advocate for issues and people. Concurrent enrollment in ID 3572 and ID 3573 is required. Contact the Off-Campus Study Programs Office (612-626-2044 or 240 Appleby) for more information.

ID 3572 Metro Urban Studies Term: Social Policy and Anti-Poverty Strategies in Theory and Practice
4 credit(s); prereq Concurrent registration is required (or allowed) in 3571, 3573, dept consent; Meets CLE req of Diversity and Soc Justice US
Instructor: Holliday, David Wallace
Description: In the Metro Urban Studies Term students actively delve into major challenges of our time: poverty, inequality and social change. Connecting these issues is at the core of the program. Instead of just learning about these problems in the classroom, students actively explore solutions and become engaged in organization committed to social transformation. This program focuses on learning the basics of organizing in communities and workplaces, how to persuade others to become critically engaged, and how to be an effective advocate for issues and people. Concurrent enrollment in ID 3572 and ID 3573 is required. Contact the Off-Campus Study Programs Office (612-626-2044 or 240 Appleby) for more information.
critically engaged, and how to be an effective advocate for issues and people. Concurrent enrollment in ID 3571 and ID 3573 is required. Contact the Off-Campus Study Programs Office (612-626-2044 or 240 Appleby) for more information.

ID 3573 HECUA Off-Campus Study Program: Metro Urban Studies Term Internship Seminar
8 credit(s); prereq Concurrent registration is required (or allowed) in 3571, 3572, dept consent; contact CCLC, 345 Fraser H, 626-2044; Meets CLE req of Civic Life and Ethics; Instructor: Holliday, David Wallace Description: In the Metro Urban Studies Term students actively delve into major challenges of our time: poverty, inequality and social change. Connecting these issues is at the core of the program. Instead of just learning about these problems in the classroom, students actively explore solutions and become engaged in organizations committed to social transformation. This program focuses on learning the basic of organizing in communities and workplaces, how to persuade others to become critically engaged, and how to be an effective advocate for issues and people. This is an 8-credit internship in the Twin Cities. Concurrent enrollment in ID 3571 and ID 3573 is required. Contact the Off-Campus Study Programs Office (612-626-2044 or 240 Appleby) for more information.

ID 3591 HECUA Off-Campus Study Program: Environmental Sustainability: Adaptive Ecosystem Management
A-F only, 4 credit(s); prereq Concurrent registration is required (or allowed) in 3592, Concurrent registration is required (or allowed) in 3593, Concurrent registration is required (or allowed) in 3594, dept consent; Meets CLE req of Environment; Instructor: Holliday, David Wallace Description: Students will gain a practical understanding of the ecological and physical processes that underlie environmental degradation. This course includes both classroom and field work. All majors are welcome! Concurrent registration in ID 3592, 3593, & 3594 is required. Contact the CCLC (612-626-2044) for more information.

ID 3592 HECUA Off-Campus Study Program: Environmental Sustainability: Dimensions of Environmental Change
A-F only, 4 credit(s); prereq Concurrent registration is required (or allowed) in 3591, Concurrent registration is required (or allowed) in 3593, Concurrent registration is required (or allowed) in 3594, dept consent; Meets CLE req of Social Sciences; Instructor: Holliday, David Wallace Description: All majors are welcome! Students explore how humans understand environmental sustainability, how current power dynamics and trends towards a global free market impact local efforts to promote sustainability, and how community and social movements are developing alternative visions of environmental sustainability. This course includes both classroom and field work. Concurrent registration in ID 3591, 3593, & 3594 is required. Contact the CCLC (612-626-2044) for more information.

ID 3593 HECUA Off-Campus Study Program in Sustainability: Field Methods Research and Investigation
A-F only, 4 credit(s); prereq Concurrent registration is required (or allowed) in 3591, Concurrent registration is required (or allowed) in 3592, 3594, dept consent; Meets CLE req of Biological Sciences; Instructor: Holliday, David Wallace Description: All majors are welcome! In this component of the program, students have an opportunity to work with scientists and community members to conduct publishable research. Concurrent registration in ID 3591, 3592, & 3594 is required. Contact the CCLC (612-626-2044) for more information.

ID 3594 HECUA Off-Campus Study Program: Environmental Sustainability, Internship
A-F only, 4 credit(s); prereq Concurrent registration is required (or allowed) in 3591, Concurrent registration is required (or allowed) in 3592, Concurrent registration is required (or allowed) in 3593, dept consent; Meets CLE req of Civic Life and Ethics; Instructor: Holliday, David Wallace Description: All majors are welcome! This 15-hour per week internship gives students an opportunity to interact and work with one of the most active networks of environmental organizations in the country. Concurrent registration in ID 3591, 3592, & 3593 is required. Contact the CCLC (612-626-2044) for more information.

ID 3900 University YMCA Collegiate Allies
S-N only, 1 credit(s); prereq Active participation in a UYWCA program, instr consent; Instructor: Neiman, Patricia Jane Description: Student may contact the instructor or department for information.

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S-N only, 1 credit(s); prereq Active participation in a UYWCA program, instr consent; Instructor: Neiman, Patricia Jane Description: Student may contact the instructor or department for information.
### Interior Design

#### 240 McNeal Hall

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDES 1601</td>
<td>Interior Design Studio I</td>
<td>STAFF</td>
<td>Introduction to theories used to solve interior design problems related to human behavior. Course based upon the design process and communication skills required of the interior design profession.</td>
<td>A-F only, 4 credit(s); prereq Interior design pre-major credit will not be granted if credit already received for: DHA 1601;</td>
<td>For information.</td>
</tr>
<tr>
<td>IDES 2196</td>
<td>Work Experience in Interior Design S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent</td>
<td>Hadjiyanni, Tasoulla</td>
<td>For information.</td>
<td>S-N only, 1-4 credit(s), max credits 8, 8 completions allowed; prereq instr consent, dept consent, college consent;</td>
<td>For information.</td>
</tr>
<tr>
<td>IDES 2196</td>
<td>Work Experience in Interior Design S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent</td>
<td>Martin, Caren Samter</td>
<td>For information.</td>
<td>S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent;</td>
<td>For information.</td>
</tr>
<tr>
<td>IDES 2196</td>
<td>Work Experience in Interior Design S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent</td>
<td>Guerin, Denise A</td>
<td>For information.</td>
<td>S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent;</td>
<td>For information.</td>
</tr>
<tr>
<td>IDES 2603</td>
<td>Interior Design Studio III A-F only, 4 credit(s); prereq [1602 or DHA 1602] with grade of at least C-, pass portfolio review, interior design major credit will not be granted if credit already received for: DHA 2603;</td>
<td>Martin, Caren Samter</td>
<td>For information.</td>
<td>A-F only, 4 credit(s); prereq [1602 or DHA 1602] with grade of at least C-, pass portfolio review, interior design major credit will not be granted if credit already received for: DHA 2603;</td>
<td>For information.</td>
</tr>
<tr>
<td>IDES 2621</td>
<td>Computer Aided Design: Interior Design 1-4 credit(s), max credits 8, 8 completions allowed; prereq instr consent, department for information.</td>
<td>Zollinger, Stephanie Watson</td>
<td>For information.</td>
<td>A-F only, 4 credit(s); prereq [Interior design major, pass portfolio review] or instr consent credit will not be granted if credit already received for: DHA 2621;</td>
<td>5% Lecture, 10% Discussion. studio projects</td>
</tr>
<tr>
<td>IDES 3161</td>
<td>History of Interiors and Furnishings: Ancient to 1750 1-4 credit(s), max credits 8, 8 completions allowed; prereq instr consent, department for information.</td>
<td>STAFF</td>
<td>Study of European and American interiors and furnishings including furniture, textiles and decorative objects.</td>
<td>A-F only, 4 credit(s); prereq will not be granted if credit already received for: DHA 4161; Meets CLE req of Global Perspectives;</td>
<td>5% Lecture, 10% Discussion. studio projects</td>
</tr>
<tr>
<td>IDES 3605</td>
<td>Interior Design Studio V 1-4 credit(s), max credits 8, 8 completions allowed; prereq instr consent, department for information.</td>
<td>Martin, Caren Samter</td>
<td>Advanced interior design projects dealing with small to medium scale spaces. Emphasizes special-needs populations.</td>
<td>A-F only, 4 credit(s); prereq [(2402 or DHA 2402), (2604 or DHA 2604), 2613] with grade of at least C-, interior design major credit will not be granted if credit already received for: DHA 3605;</td>
<td>5% Lecture, 10% Discussion. design problem solving</td>
</tr>
<tr>
<td>IDES 3614</td>
<td>Interior Design Ethics and Professional Practice 1-4 credit(s), max credits 8, 8 completions allowed; prereq instr consent, department for information.</td>
<td>STAFF</td>
<td>Advanced interior design projects dealing with small to medium scale spaces. Emphasizes special-needs populations.</td>
<td>A-F only, 4 credit(s); prereq 2604 or DHA 2604 credit will not be granted if credit already received for: DHA 3614; Meets CLE req of Civic Life and Ethics;</td>
<td>5% Lecture, 30% Discussion. portions of the course on the web</td>
</tr>
<tr>
<td>IDES 416G</td>
<td>Honors Capstone Project A-F only, 2 credit(s), max credits 4; prereq Interior design honors;</td>
<td>Hadjiyanni, Tasoulla</td>
<td>Multiple choice, essay</td>
<td>A-F only, 2 credit(s), max credits 4; prereq Interior design honors;</td>
<td>20% special projects, 30% quizzes, 10% class participation, 40% problem solving.</td>
</tr>
<tr>
<td>IDES 416G</td>
<td>Honors Capstone Project A-F only, 2 credit(s), max credits 4; prereq Interior design honors;</td>
<td>Martin, Caren Samter</td>
<td>Multiple choice, essay</td>
<td>A-F only, 2 credit(s), max credits 4; prereq Interior design honors;</td>
<td>For information.</td>
</tr>
</tbody>
</table>
IDES 4160H Honors Capstone Project
A-F only, 2 credit(s), max credits 4; prereq Interior design honors;
Instructor: Guerin, Denise A
Description: Student may contact the instructor or department for information.

IDES 4160H Honors Capstone Project
A-F only, 2 credit(s), max credits 4; prereq Interior design honors;
Instructor: Zollinger, Stephanie Watson
Description: Student may contact the instructor or department for information.

IDES 4193 Directed Study in Interior Design
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;
Instructor: Hadjiyanni, Tasoulla
Description: Student may contact the instructor or department for information.

IDES 4193 Directed Study in Interior Design
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;
Instructor: Martin, Caren Samter
Description: Student may contact the instructor or department for information.

IDES 4193 Directed Study in Interior Design
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;
Instructor: Zollinger, Stephanie Watson
Description: Student may contact the instructor or department for information.

IDES 4196 Internship in Interior Design
S-N only, 1-4 credit(s), max credits 4; prereq Completion of at least on-half of professional sequence, plan submitted/approved in advance by [adviser, internship supervisor], written consent of faculty supervisor, instr consent; Credit will not be granted if credit has been received for: ADES 4196;
Instructor: Guerin, Denise A
Description: Student may contact the instructor or department for information.

IDES 4196 Internship in Interior Design
S-N only, 1-4 credit(s), max credits 4; prereq Completion of at least on-half of professional sequence, plan submitted/approved in advance by [adviser, internship supervisor], written consent of faculty supervisor, instr consent; Credit will not be granted if credit has been received for: ADES 4196;
Instructor: Zollinger, Stephanie Watson
Description: Student may contact the instructor or department for information.

IDES 4607 Interior Design Studio VII
A-F only, 4 credit(s); prereq [3606 or DHA 3606] with grade of at least C-, 3614 credit will not be granted if credit already received for: DHA 4607;
Instructor: STAFF
Description: Interior Design Studio for majors. The course addresses sense of place and the contribution of artifacts to interior environments. The projects include using historic precedent for adaptive use or renovation of spaces. Life safety issues and universal design are part of the design parameters.
Style: 5% Lecture, 10% Discussion. design studio, critique and the design process
Grading: 15% in-class presentation, 5% class participation, 80% other evaluation. design projects

IDES 4615W Interior Design Research
A-F only, 2 credit(s); prereq 3606 or DHA 3606 credit will not be granted if credit already received for: DHA 4615W; Meets CLE req of Writing Intensive;
Instructor: Guerin, Denise A
Description: Student may contact the instructor or department for information.

IDES 5193 Directed Study in Interior Design
A-F only, 1-4 credit(s), max credits 8; prereq Jr or sr or grad student;
Instructor: Hadjiyanni, Tasoulla
Description: Student may contact the instructor or department for information.

IDES 5193 Directed Study in Interior Design
A-F only, 1-4 credit(s), max credits 8; prereq Jr or sr or grad student;
Instructor: Martin, Caren Samter
Description: Student may contact the instructor or department for information.

IDES 5193 Directed Study in Interior Design
A-F only, 1-4 credit(s), max credits 8; prereq Jr or sr or grad student;
Instructor: Zollinger, Stephanie Watson
Description: Student may contact the instructor or department for information.

IDES 5193 Directed Study in Interior Design
A-F only, 1-4 credit(s), max credits 8; prereq Jr or sr or grad student;
Instructor: Hadjiyanni, Tasoulla
Description: Student may contact the instructor or department for information.

IDES 5193 Directed Study in Interior Design
A-F only, 1-4 credit(s), max credits 8; prereq Jr or sr or grad student;
Instructor: Martin, Caren Samter
Description: Student may contact the instructor or department for information.

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A-F only, 1-4 credit(s), max credits 8; prereq Jr or sr or grad student;
Instructor: Zollinger, Stephanie Watson
Description: Student may contact the instructor or department for information.

IDES 5193 Directed Study in Interior Design
A-F only, 1-4 credit(s), max credits 8; prereq Jr or sr or grad student;
Instructor: Hadjiyanni, Tasoulla
Description: Student may contact the instructor or department for information.

IDES 5193 Directed Study in Interior Design
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed;
Instructor: Hadjiyanni, Tasoulla
Description: Student may contact the instructor or department for information.

IDES 8192 Readings in Interior Design
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed;
Instructor: Zollinger, Stephanie Watson
Description: Student may contact the instructor or department for information.

IDES 8192 Readings in Interior Design
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed;
Instructor: Martin, Caren Samter
Description: Student may contact the instructor or department for information.
IDES 8192 Readings in Interior Design
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; 
prereq instr consent ;
Instructor: Zollinger,Stephanie Watson 
Description: Student may contact the instructor or department for information.

IDES 8193 Directed Study
A-F only, 1-3 credit(s), max credits 8, 8 completions allowed; 
prereq instr consent ;
Instructor: Hadjiyanni,Tasoulla 
Description: Student may contact the instructor or department for information.

IDES 8222 Plan B Master's Project
S-N only, 3 credit(s); prereq [DHA or design] master's 
student, instr consent ;
Instructor: Homans,Frances Reed 
Description: Student may contact the instructor or department for information.

IBUS 3002 Managerial Accounting: An International Perspective
A-F only, 4 credit(s); prereq Carlson School International Programs consent;
Instructor: Caliendo,Charles Michael 
Description: Student may contact the instructor or department for information.

Interpersonal Relationships Research
104 Child Development

IREL 8001 Proseminar in Interpersonal Relationships Research S-N only, 1 credit(s), max credits 2; prereq Grad IRel minor; 
Instructor: Simpson,Jeffry A 
Description: Student may contact the instructor or department for information.

IREL 8360 Seminar: Topics in Interpersonal Relationships Research 
1-3 credit(s), max credits 6, 3 completions allowed; prereq 
Grad IRel minor or instr consent; 
Instructor: Simpson,Jeffry A 
Description: Student may contact the instructor or department for information.

Introduced Species and Genotypes

ISG 5010 Risk Analysis for Introduced Species and Genotypes 
A-F only, 3 credit(s); prereq Grad student or [sr, instr 
consent ];
Instructor: Newman,Raymond M 
Description: Student may contact the instructor or department for information.

ISG 8001 Discussions in Introduced Species and Genotypes 
S-N only, 1 credit(s), max credits 10, 10 completions allowed; 
Instructor: Frelch, Lee E 
Description: Student may contact the instructor or department for information.

ISG 8021 Problem Solving Practicum in Risk Analysis 
A-F only, 3 credit(s), max credits 6; prereq 5010, 5020; 
Instructor: Homans,Frances Reed 
Description: Student may contact the instructor or department for information.

ISG 8031 Cooperative Learning Practicum 
A-F only, 1 credit(s); prereq 8021; 
Instructor: Galatowitsch,Susan M 
Description: Student may contact the instructor or department for information.

International Business
2-210 Carlson School of Management

ITAL 1001 Beginning Italian

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
ITAL 1002 Beginning Italian
5 credit(s); prereq 1001 or inst consent ; Credit will not be granted if credit has been received for: ITAL 4002;
Instructor: STAFF
Description: Italian 1002 is the second semester of beginning Italian: students must have completed Italian 1001 with a grade of "C-" or better in order to take Italian 1002. Italian 1002 introduces students to the language and culture of Italy. Class time is spent on presentations of new concepts and on continual use of material already taught. Students work individually, in pairs and in groups. They learn to read, write, speak and understand Italian. They view Italian films. Integral parts of this course will be the online assignments (Quia workbook and laboratory manuals) that students are required to do at home and the cultural reading text Stelle, perle e mistero. By the end of the second semester, students can communicate in a number of real life situations and are becoming comfortable with the present and the past tenses. Students who pass 1002 with a grade of "C-" or higher can then move on to Italian 1003.
Grading: 15% final exam, 65% quizzes, 5% class participation, 15% other evaluation. oral presentations
Exam Format: Fill in the blank; true/false; essay; short answer

ITAL 1003 Intermediate Italian
5 credit(s); prereq 1001-1002; Credit will not be granted if credit has been received for: ITAL 4003;
Instructor: STAFF
Description: Italian 1003 is the third semester course of Italian language and culture. (Students must have completed the equivalent of a year of university level Italian instruction before taking this course.) Students concentrate on mastering elements of grammar and on increasing their active vocabularies. They continue to read, write, speak and listen to current Italian. Each student chooses a topic for a cultural presentation, which is both written and spoken. Italian films are integrated into the program. An integral part of this course is reading the text, Pinocchio. The grade is based on daily participation and homework performance, frequent quizzes, oral exams, compositions, cultural presentation and the final exam. At the end of the third semester, students who pass with a grade of "C-" or higher are ready to move on to Italian 1004 or to study in Italy.
Grading: 10% final exam, 70% quizzes, 5% class participation, 15% other evaluation. oral exam
Exam Format: essay, short answer, fill-in-blank, true/false

ITAL 1004 Intermediate Italian
5 credit(s); prereq 1001, 1002, 1003; Credit will not be granted if credit has been received for: ITAL 4004;
Instructor: STAFF
Description: Italian 1004 is the fourth semester course of Italian language and culture. (Students must have completed the equivalent of one and a half years of university level Italian instruction before taking this course.) Having learned all the basic grammar concepts students now concentrate on mastering these elements and on increasing their active vocabularies. They continue to read, write, speak and listen to Italian. Each student chooses a topic for a cultural presentation, which is both written and spoken. Italian films are integrated into the program. At the end of the fourth semester, students who pass with a grade of "C-" or higher are ready to move on to Italian 3015 or to study in Italy.
Grading: 10% final exam, 70% quizzes, 5% class participation, 15% other evaluation. oral exam
Exam Format: essay, short answer, fill-in-blank, true/false, various presentations

ITAL 4001 Beginning Italian
2 credit(s); prereq Grad student or inst consent ; Credit will not be granted if credit has been received for: ITAL 1001;
Instructor: Lavecchia,Omella
Description: Student may contact the instructor or department for information.

ITAL 4002 Beginning Italian
2 credit(s); prereq Grad student or inst consent ; Credit will not be granted if credit has been received for: ITAL 1002;
Instructor: Berge,Nels A
Description: Student may contact the instructor or department for information.

ITAL 4004 Intermediate Italian
2 credit(s); prereq Grad student or inst consent ; Credit will not be granted if credit has been received for: ITAL 1004;
Instructor: Dregni,Erin J
Description: Student may contact the instructor or department for information.

ITAL 4970 Directed Readings
1-4 credit(s), max credits 16, 4 completions allowed; prereq instr consent;
Instructor: STAFF
Description: Meets unique requirements decided on by faculty member and student. Individual contracts are drawn up listing contact hours, number of credits, written and other work required.

ITAL 5640 Topics in Italian Studies
3 credit(s), max credits 12, 4 completions allowed; prereq 3015;
Instructor: Bortoletti,Francesca
Description: Student may contact the instructor or department for information.

ITAL 5970 Directed Readings
1-4 credit(s), max credits 16, 4 completions allowed; prereq instr consent;
Instructor: STAFF
Description: Meets unique requirements decided on by faculty member and student. Individual contracts are drawn up listing contact hours, number of credits, written and other work required.

ITAL 8992 Directed Readings
1-4 credit(s), max credits 16, 4 completions allowed; prereq instr consent;
Instructor: Noakes,Susan J
Description: Student may contact the instructor or department for information.
Description: Student may contact the instructor or department for information.

Japanese

136 Klaeber Court

JPN 1011 Beginning Japanese
6 credit(s); Credit will not be granted if credit has been received for: JPN 4001;
Instructor: Tazawa, Kenichi
Description: This course is the first of a two-semester sequence of Beginning Japanese; it is for students who have no previous knowledge of Japanese. It aims to begin development of communication skills in Japanese. Therefore, we will work on the four basic skills of language (speaking, listening, reading, and writing) as well as culture-specific skills (do's and don'ts). The following topics are covered in this semester: 1. Meeting people for the first time 2. Shopping and eating out 3. Describing activities and extending/declining invitations 4. Describing locations and things in the past 5. Making offers and talking about travel 6. Making a request, asking for/giving permission, and talking about rules The course will cover lessons 1 through 6 of Genki including both dialogue/grammar and reading/writing. It is expected that, by the end of this semester, students will have basic conversation skills in situations like those noted above, as well as rudimentary literacy in Japanese. Two types of Japanese characters (hiragana and katakana), as well as 58 Chinese characters (kanji) will be learned.
Style: 29% Lecture, 71% Discussion.
Grading: 15% quizzes, 20% written homework, 10% attendance. Lesson Tests 35% (5 times) Oral Interviews 10% (2 times) Dialogue Checks 10% (Each Lesson)

JPN 3021 Intermediate Japanese
5 credit(s); prereq 1012 or instr consent; Credit will not be granted if credit has been received for: JPN 4003;
Instructor: Emmett, Keiko
Description: Student may contact the instructor or department for information.

JPN 3031 Third-Year Japanese
4 credit(s); prereq 3022 or instr consent;
Instructor: Buchanan, Michiko Todokoro
Description: Student may contact the instructor or department for information.

JPN 3031 Third-Year Japanese
4 credit(s); prereq 3022 or instr consent;
Instructor: Kawakami, Keiko
Description: Student may contact the instructor or department for information.

JPN 3200 Japanese Language Teaching Tutorial
S-N only, 1 credit(s), max credits 2; prereq Grade of A in 4042;
Instructor: Buchanan, Michiko Todokoro
Description: Student may contact the instructor or department for information.

JPN 4001 Beginning Japanese
3 credit(s); prereq Grad student; Credit will not be granted if credit has been received for: JPN 1011;
Instructor: Tazawa, Kenichi
Description: This course is the first of a two-semester sequence of Beginning Japanese; it is for students who have no previous knowledge of Japanese. It aims to begin development of communication skills in Japanese. Therefore, we will work on the four basic skills of language (speaking, listening, reading, and writing) as well as culture-specific skills (do's and don'ts). The following topics are covered in this semester: 1. Meeting people for the first time 2. Shopping and eating out 3. Describing activities and extending/declining invitations 4. Describing locations and things in the past 5. Making offers and talking about travel 6. Making a request, asking for/giving permission, and talking about rules The course will cover lessons 1 through 6 of Genki including both dialogue/grammar and reading/writing. It is expected that, by the end of this semester, students will have basic conversation skills in situations like those noted above, as well as rudimentary literacy in Japanese. Two types of Japanese characters (hiragana and katakana), as well as 58 Chinese characters (kanji) will be learned.
Style: 29% Lecture, 71% Discussion.
Grading: 15% quizzes, 20% written homework, 10% attendance. Lesson Tests 35% (5 times) Oral Interviews 10% (2 times) Dialogue Checks 10% (Each Lesson)

JPN 4003 Intermediate Japanese
3 credit(s); prereq 4002, grad student; Credit will not be granted if credit has been received for: JPN 3021;
Instructor: Emmett, Keiko
Description: Student may contact the instructor or department for information.

JPN 4005 Third Year Japanese
3 credit(s); prereq 4004, grad student; Credit will not be granted if credit has been received for: JPN 4006;
Instructor: Buchanan, Michiko Todokoro
Description: Student may contact the instructor or department for information.

JPN 4041 Advanced Japanese Conversation and Composition
4 credit(s); prereq 3032 or instr consent;
Instructor: Matsumoto, Fumiko
Description: Student may contact the instructor or department for information.

JPN 5040 Readings in Japanese Texts
A-F only, 3 credit(s), max credits 9, 3 completions allowed; prereq 4042 or equiv or instr consent;
Instructor: Marran, Christine L
Description: In this course, students read various Japanese-language fictional and theoretical texts. In the Spring of 2010, we will read texts particularly related to ecocriticism and environmentalism.
Style: 100% Discussion.
Grading: 100% class participation.

JPN 5993 Directed Studies in Japanese
1-15 credit(s), max credits 15, 1 completion allowed; prereq instr consent, dept consent, college consent;
Instructor: Buchanan, Michiko Todokoro
Description: Student may contact the instructor or department for information.

JPN 5993 Directed Studies in Japanese
1-15 credit(s), max credits 15, 1 completion allowed; prereq instr consent, dept consent, college consent;
Instructor: Isaka, Maki
Description: Student may contact the instructor or department for information.

JPN 5993 Directed Studies in Japanese
1-15 credit(s), max credits 15, 1 completion allowed; prereq instr consent, dept consent, college consent;
Instructor: Marran, Christine L
Description: Student may contact the instructor or department for information.

JWST 1201 The Bible: Context and Interpretation
3 credit(s); Credit will not be granted if credit has been received for: RELS 3201; Meets CLE req of Literature;
Instructor: STAFF
Description: Student may contact the instructor or department for information.
Description: Where did the Hebrew Bible ("Old Testament") come from? In what way do the worldviews and traditions expressed by its ancient authors compare with those of the superpowers of their day, including the Canaanites (from Ugarit), the Hittites, the Egyptians, and the Mesopotamians? How did the text of the Hebrew Bible come to represent a millennium of beliefs, desires, and customs from ancient Israel and Judah, many of which still reverberate in our society today? Integrating a cross-disciplinary spectrum of religion, history, and literature, students in this class will read, analyze, and interpret Hebrew Bible texts in English, using methods employed by biblical scholars. This class fulfills the Liberal Education Requirement of Literature because in it students read the Hebrew Bible as ancient literature, asking questions about language and meaning, literary effects, and the Hebrew Bible’s social and historical contexts. Since we will engage in secular study only, analytically examining all relevant religious texts and traditions, students are required to have an open mind and willingness to read and discuss the Bible in a new way.

JWST 3201 The Bible: Context and Interpretation
3 credit(s); Credit will not be granted if credit has been received for: RELS 3201; Meets CLE req of Literature; Instructor: STAFF
Description: Where did the Hebrew Bible ("Old Testament") come from? In what way do the worldviews and traditions expressed by its ancient authors compare with those of the superpowers of their day, including the Canaanites (from Ugarit), the Hittites, the Egyptians, and the Mesopotamians? How did the text of the Hebrew Bible come to represent a millennium of beliefs, desires, and customs from ancient Israel and Judah, many of which still reverberate in our society today? Integrating a cross-disciplinary spectrum of religion, history, and literature, students in this class will read, analyze, and interpret Hebrew Bible texts in English, using methods employed by biblical scholars. This class fulfills the Liberal Education Requirement of Literature because in it students read the Hebrew Bible as ancient literature, asking questions about language and meaning, literary effects, and the Hebrew Bible’s social and historical contexts. Since we will engage in secular study only, analytically examining all relevant religious texts and traditions, students are required to have an open mind and willingness to read and discuss the Bible in a new way.

JWST 3900 Topics: Jewish Studies
A-F only, 3 credit(s), max credits 15, 5 completions allowed; Instructor: Ashkenazi,Ofer
Description: Student may contact the instructor or department for information.

JWST 3900 Topics: Jewish Studies
A-F only, 3 credit(s), max credits 15, 5 completions allowed; Instructor: Ashkenazi,Ofer
Description: Student may contact the instructor or department for information.

JWST 4001W Final Project, Writing Intensive
A-F only, 1 credit(s); prereq concurrent enrollment 5xxx, JWSt major, permission of dir of undergrad studies; Meets CLE req of Writing Intensive; Instructor: STAFF
Description: Student may contact the instructor or department for information.

JOUR 3173W Magazine Writing
A-F only, 3 credit(s); prereq [3004W or 3304V, 3101 or 3101H, JwSt major or approved IDIM major or ICP major or BIS major]; prereqs do not apply to IDL sections; Meets CLE
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent; Instructor: Doyle,Kenneth Owen
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent; Instructor: Sullivan,Dan
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent; Instructor: Ison,Christopher John
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent; Instructor: Doyle,Kenneth Owen
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent; Instructor: Pedelty,Mark Holmes
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent; Instructor: Faber,Ronald J
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent; Instructor: Schwartz,Donna
Description: Student may contact the instructor or department for information.
JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent;
Instructor: Eichmey, John
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent;
Instructor: Hansen, Kathleen Ann
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent;
Instructor: Leighton, Gordon
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent;
Instructor: Golden, Gayle Celeste
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent;
Instructor: Kirtley, Jane E
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent;
Instructor: Southwell, Brian G
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent;
Instructor: Eichmey, John
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent;
Instructor: Huh, Jisu
Description: Student may contact the instructor or department for information.

JOUR 3993H Honors: Projects
A-F only, 3 credit(s); prerequisite: [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent;
Instructor: Yzer, Marco
Description: Student may contact the instructor or department for information.

JOUR 3993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed; prereq [jour major or jour minor or approved IDIM major or ICP major or BIS major], instr consent, dept consent, college consent;
Instructor: Squires, Catherine R
Description: Student may contact the instructor or department for information.
college consent, dept consent, instr consent;
Instructor: Doyle, Kenneth
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Benson, Dana Richard
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Sullivan, Dan
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Ison, Christopher John
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Pedelty, Mark Holmes
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Williams, Jennifer Lisa
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Faber, Ronald J
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Schwartz, Dona
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Tims, Albert R
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Wackman, Daniel Bruce
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Hansen, Kathleen Ann
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Leighton, Gordon
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Golden, Gayle Celeste
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Kirtley, Jane E
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Southwell, Brian G
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Eighmey, John
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Huh, Ju
Description: Student may contact the instructor or department for information.

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A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Yzer, Marco
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Johnson, Jennifer M
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Squires, Catherine R
Description: Student may contact the instructor or department for information.

JOUR 4993H Honors: Projects
A-F only, 3 credit(s); prereq Jour major, honors div regis, college consent, dept consent, instr consent;
Instructor: Thiel-Stern, Shayla
Description: Student may contact the instructor or department for information.

JOUR 5993 Directed Study
A-F only, 1-3 credit(s); max credits 6, 6 completions allowed; prereq [Jour major or jour minor or approved IDIM major or ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
Instructor: Doyle, Kenneth Owen
Description: Student may contact the instructor or department for information.

JOUR 5993 Directed Study
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prereq [Jour major or jour minor or approved IDIM major or
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ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Faber, Ronald J
Description: Student may contact the instructor or department for information.

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prereq [Jour major or jour minor or approved IDIM major or
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Instructor: Tims, Albert R
Description: Student may contact the instructor or department for information.

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prereq [Jour major or jour minor or approved IDIM major or
ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Wickman, Daniel Bruce
Description: Student may contact the instructor or department for information.

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prereq [Jour major or jour minor or approved IDIM major or
ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Hansen, Kathleen Ann
Description: Student may contact the instructor or department for information.

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A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
prereq [Jour major or jour minor or approved IDIM major or
ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Leighton, Gordon
Description: Student may contact the instructor or department for information.

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A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
prereq [Jour major or jour minor or approved IDIM major or
ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Golden, Gayle Celeste
Description: Student may contact the instructor or department for information.

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A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
prereq [Jour major or jour minor or approved IDIM major or
ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Kirtley, Jane E
Description: Student may contact the instructor or department for information.

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A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
prereq [Jour major or jour minor or approved IDIM major or
ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Southwell, Brian G
Description: Student may contact the instructor or department for information.

JOUR 5993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
prereq [Jour major or jour minor or approved IDIM major or
ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Eighmey, John
Description: Student may contact the instructor or department for information.

JOUR 5993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
prereq [Jour major or jour minor or approved IDIM major or
ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Huh, Jisu
Description: Student may contact the instructor or department for information.

JOUR 5993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
prereq [Jour major or jour minor or approved IDIM major or
ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Southwell, Brian G
Description: Student may contact the instructor or department for information.

JOUR 5993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
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Description: Student may contact the instructor or department for information.

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A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
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Description: Student may contact the instructor or department for information.

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A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
prereq [Jour major or jour minor or approved IDIM major or
ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Yzer, Marco
Description: Student may contact the instructor or department for information.

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A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
prereq [Jour major or jour minor or approved IDIM major or
ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Squires, Catherine R
Description: Student may contact the instructor or department for information.

JOUR 5993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
prereq [Jour major or jour minor or approved IDIM major or
ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Squires, Catherine R
Description: Student may contact the instructor or department for information.
University of Minnesota - Course Guide for Twin Cities Campus  Fall 2011

consent, dept consent, instr consent;
Instructor: Sanders, Amy Kristin
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-3 credit(s), max credits 6, 6 completions allowed;
prereq [Jour major or jour minor or approved IDIM major or ICP major or BIS major], GPA of at least 3.00, college consent, dept consent, instr consent;
Instructor: Thiel-Stern, Shayla
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, inst consent, dept consent;
Instructor: Doyle, Kenneth Owen
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Sullivan, Dan
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Isom, Christopher John
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Pedelty, Mark Holmes
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Dell'Orto, Giovanna
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Faber, Ronald J
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Schwartz, Dona
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Tims, Albert R
Description: Student may contact the instructor or department for information.

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JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Wackman, Daniel Bruce
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Hansen, Kathleen Ann
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Leighton, Gordon
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Golden, Gayle Celeste
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Kirtley, Jane E
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Southwell, Brian G
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Eighmey, John
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Huh, Jisu
Description: Student may contact the instructor or department for information.

JOUR 8993 Directed Study
A-F only, 1-6 credit(s), max credits 6, 6 completions allowed;
prereq Grad mass comm major or minor, instr consent, dept consent;
Instructor: Yzer, Marco
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
KIN 1375 Play Behavior
3 credit(s);
Instructor: Rodgerson, Richard W
Description: The course is designed to provide an introductory overview of play behavior across species, cultures and behavioral settings. Topics include the physical and psychological development of play, sports and games, toy and playground design. Emphasis is on functional relationships between play and learning in educational and recreational environments.

KIN 1871 Survey of Kinesiology, Recreation, and Sport
A-F only, 3 credit(s);
Instructor: Bhalla PhD, Jennifer Anita
Description: Professional practice and disciplinary dimensions of kinesiology, recreation, and sport. Subdisciplines, relevant issues, practical applications.

KIN 1905 Freshman Seminar
1-3 credit(s), max credits 6; prereq Fr;
Instructor: Bhalla PhD, Jennifer Anita
Description: Student may contact the instructor or department for information.

KIN 3001 Lifetime Health and Wellness
A-F only, 3 credit(s); Meets CLE req of Social Sciences;
Instructor: Ingraham, Stacy Jean
Description: This class addresses current health and wellness issues at the individual, local and global levels. The components of wellness involve: physical, social, emotional, intellectual, spiritual, environmental and financial health. The goal of the class is to develop strategies that improve quality of life throughout life expectancy. This is an interactive class through lecture. The target audience for this class is students desiring a healthy and productive life.
Style: 80% Lecture, 15% Discussion.
Grading: 14% mid exam, 14% final exam, 29% reports/papers, 3% quizzes, 23% written homework, 10% reflection paper, 7% in-class presentation.
Exam Format: Multiple choice / T-F

KIN 3001 Lifetime Health and Wellness
A-F only, 3 credit(s); Meets CLE req of Social Sciences;
Instructor: Statt, Eric H
Description: Overview of health and wellness, including physical, emotional, intellectual, spiritual, social, environmental, and financial health. Societal changes and the influences of these changes on the general health and wellness of diverse populations.

KIN 3027 Human Anatomy for Kinesiology Students
A-F only, 3 credit(s);
Instructor: STAFF
Description: Introduction to human anatomy. Emphasizes musculoskeletal anatomy germane to athletic training, biomechanics, exercise physiology, motor learning/development.

KIN 3112 Introduction to Biomechanics
A-F only, 4 credit(s); prereq [PHYS 1101W or PHYS 1201W or PHYS 1301W or PHYS 1401V], [3027 or 3111 or ANAT 3001 or ANAT 3601 or ANAT 3611 or INMD 3001 or INMD 3601];
Instructor: Konczak PhD, Juergen
Description: This is an introductory course to biomechanics. The course consists of a weekly lecture and a laboratory session. The lecture portion of the course introduces basic concepts of physics and applies them to the analysis of human motion. It expands the knowledge students have gained in human anatomy by relating anatomy to human motor function. The laboratory sessions are designed to provide hands-on experiences and to familiarize students with the array of instrumentations used for biomechanical analysis. Basic knowledge of trigonometry and algebra is needed. This course is required for majors in kinesiology. It is also suitable for students interested in careers in the health sciences, biology and biomedical engineering.
Style: 60% Lecture, 10% Discussion, 30% Laboratory.
Grading: 25% mid exam, 30% final exam, 25% laboratory evaluation, 20% other evaluation. six-week exam
Exam Format: A mix of multiple choice, essay questions

KIN 3113 First Responder for Coaches and Athletic Trainers
A-F only, 3 credit(s);
Instructor: Mc Neil MA, Mary Ann
Description: This nationally recognized curriculum is taught according to the standards of the Department of Transportation (USDOT). It is presented in an interactive and small group format to prepare students to work at the level of First Responder, the first level in the EMS chain of emergency care delivery. Certification includes: AHA-BLS for Health Care Providers and USDOT First Responder. Includes: Patient assessment, airway management, trauma care and critical thinking.
Style: 30% Lecture, 5% Film/Video, 30% Laboratory, 30% Small Group Activities, 5% Guest Speakers. This course is scenario based learning. Every class will contain 1/2 didactic presentations, 1/2 activities.
Grading: 20% final exam, 20% quizzes, 10% in-class presentation, 25% class participation, 25% laboratory evaluation. Student may not miss >3 class sessions. This will result in dismissal from the course.
Exam Format: Combination written/practical skills demonstration.

KIN 3113 First Responder for Coaches and Athletic Trainers
A-F only, 3 credit(s);
Instructor: Rozenbergs, Viktors Uld
Description: This nationally recognized curriculum is taught according to the standards of the Department of Transportation (USDOT). It is presented in an interactive and small group format to prepare students to work at the level of First Responder, the first level in the EMS chain of emergency care delivery. Certification includes: AHA-BLS for Health Care Providers and USDOT First Responder. Includes: Patient assessment, airway management, trauma care and critical thinking.
Style: 30% Lecture, 5% Film/Video, 30% Laboratory, 30% Small Group Activities, 5% Guest Speakers. This course is scenario based learning. Every class will contain 1/2 didactic presentations, 1/2 activities.
Grading: 20% final exam, 20% quizzes, 10% in-class presentation, 25% class participation, 25% laboratory evaluation. Student may not miss >3 class sessions. This will result in dismissal from the course.
Exam Format: Combination written/practical skills demonstration.
KIN 3113 First Responder for Coaches and Athletic Trainers
A-F only, 3 credit(s);
Instructor: Alberti,Laszlo S
Description: This nationally recognized curriculum is taught according to the standards of the Department of Transportation (USDOT). It is presented in an interactive and small group format to prepare students to work at the level of First Responder, the first level in the EMS chain of emergency care delivery. Certification includes: AHA-BLS for Health Care Providers and USDOT First Responder. Includes: Patient assessment, airway management, trauma care and critical thinking.
Style: 30% Lecture, 5% Film/Video, 30% Laboratory, 30% Small Group Activities, 5% Guest Speakers. This course is scenario based learning. Every class will contain 1/2 didactic presentations, 1/2 activities.
Grading: 20% final exam, 20% quizzes, 10% in-class presentation, 25% class participation, 25% laboratory evaluation. Student may not miss >3 class sessions. This will result in dismissal from the course.
Exam Format: Combination written/practical/skills demonstration.

KIN 3126W Sport and Exercise Psychology
A-F only, 3 credit(s); prereq Kin major or instr consent ;
Meets CLE req of Writing Intensive;
Instructor: Kipp,Lindsay
Description: Thoughts, feelings, and behaviors of people in physical activity contexts. Foundations approach to theory/research in sport and exercise psychology.

KIN 3131W History and Philosophy of Sport
A-F only, 3 credit(s); prereq Kin major or instr consent ;
Meets CLE req of Writing Intensive;
Instructor: Thul,Chelsey Marie
Description: Introductory description and interpretation of the historical and philosophical development of physical education and sport from primitive societies to 20th century civilization.

KIN 3132 Introduction to Motor Development Across the Lifespan
A-F only, 3 credit(s); prereq credit will not be granted if credit already received for: KIN 4132 Kin major or instr consent ;
Instructor: STAFF
Description: Developmental aspects of human movement behavior/learning. Life span change of motor skills.

KIN 3135 Introduction to Motor Learning and Control
A-F only, 3 credit(s); prereq Kin major or instr consent credit will not be granted if credit already received for: KIN 4135;
Instructor: STAFF
Description: Main theoretical ideas/research that have advanced motor control/learning over last three decades.

KIN 3143 Organization and Administration of Sport
A-F only, 3 credit(s); prereq Kin major or instr consent ;
Instructor: Schull,Vicki Denise
Description: How to organize/administer sports/activities. Practice/class organization, meet/game organization, facility/equipment needs, finances.

KIN 3151 Measurement and Evaluation in Kinesiology
A-F only, 3 credit(s); prereq Kin major or instr consent ;
Instructor: STAFF
Description: Introduction to the philosophy of evaluation and measurement in physical education and exercise science. Test selection, construction, evaluation, and administration. Basic research methods, statistical analysis, and interpretation of test scores.

KIN 3168 Soccer Coaching Theory and Skill Development
A-F only, 2 credit(s); prereq [Enrolled in coaching program or KIN major or instr consent ], skills sufficient for participating in drills/game/match/contest for demonstration/teaching purposes;
Instructor: Cardarelli,Amy Jo
Description: Coaching theory and skill development necessary to coach soccer.

KIN 3171 Baseball Coaching Theory and Skill Development
A-F only, 2 credit(s); prereq [Enrolled in coaching program or KIN major or instr consent ], skills sufficient for participating in drills/game/match/contest for demonstration/teaching purposes;
Instructor: Bateman,Keith Allen
Description: Coaching theory and skill development necessary to coach baseball.

KIN 3172 Basketball Coaching Theory and Skill Development
A-F only, 2 credit(s); prereq [Enrolled in coaching program or KIN major or instr consent ], skills sufficient for participating in drills/game/match/contest for demonstration/teaching purposes;
Instructor: Dewitt,David Francis
Description: Coaching theory and skill development necessary to coach basketball.

KIN 3179 Track and Field Coaching Theory and Skill Development
A-F only, 2 credit(s); prereq [Enrolled in coaching program or KIN major or instr consent ], skills sufficient for participating in drills/game/match/contest for demonstration/teaching purposes;
Instructor: Lundstrom,Christopher J
Description: Coaching theory and skill development necessary to coach track and field.

KIN 3327 Teaching Physical Education in the Elementary School
A-F only, 2 credit(s); prereq Elem ed major;
Instructor: Mooers,Nancy Eileen Ro
Description: This course is designed for the elementary (K-8) classroom teacher. The course is activity based and designed to give the classroom teacher the ability to engage their students in age appropriate, energizing activities. Both the classroom and the gymnasium will be used for instruction and micro-teaching. Physical education classes in the gymnasium will be active while experiencing current curriculum and methodology. Emphasis will focus on the importance of regular and active physical education to the total school curriculum, with the inclusion of the health, social, and emotional benefits for the child. Elements of an effective quality physical education program will be included, such as, knowledge about the growing child, management skills/curriculum, lesson plan design, lesson presentation, communication, and age appropriate activities. Techniques to enhance communication, collaboration and integration between the physical education teacher and the classroom teacher, meeting special needs, and community involvement are also regularly addressed.
Style: 25% Lecture, 15% Discussion. Teacher modeling with student participation and student micro-teaching
Grading: 40% reports/papers, 15% special projects, 20% in-class presentation, 25% class participation.
Exam Format: No exams, performance assessment only

KIN 3327 Teaching Physical Education in the Elementary School
A-F only, 2 credit(s); prereq Elem ed major;
Instructor: Heisel,Nancy
Description: Overview of the elementary physical education process with focus on a classroom teacher's perspective and needs. Representative experiences include participation, lecture, micro-teaching, final test.

KIN 3385 Human Physiology
A-F only, 4 credit(s); prereq [KIN 3027 or ANAT 3001 or ANAT 3601 or ANAT 3611], KIN major or instr consent ;
Instructor: Blitz,George Robert
Description: Functional/integrative approach organized by level of description, from molecular genetics to dynamic movement/clinical conditions. Cellular mechanisms for major physiological functions. Exercise, fitness, health, growth.
KIN 3505 Intro to Human-Centered Design  
3 credit(s); Credit will not be granted if credit has been received for: KIN 5505;  
Instructor: Smith, Thomas J  
Description: Human-centered design (also termed user-centered design, usability engineering, human engineering or universal design) is an interdisciplinary area of design study that focuses on how design can be tailored to address, accommodate, and meet human expectations, capabilities, needs, and limitations. The rationale for the course is that 'good design makes things work better and last longer, helps make people and business more productive, and reduces discomfort and waste.' The basic premise for the course is that 'good' design means human-centered design (HCD). The course will address this premise from a number of different perspectives, considering HCD of fabricated artifacts, human-computer interfaces, built environments, and complex sociotechnical and organizational systems and environments. The course will offer a diverse mix of lecture, open discussion, design analysis projects, guest speakers, field site visits and evaluations, and differing cultural approaches to design.  
Style: 40% Lecture, 20% Discussion. student presentations  
Grading: 75% reports/papers, 25% in-class presentation.

KIN 3696 Supervised Practical Experience  
S-N only, 1-10 credit(s), max credits 10, 10 completions allowed; prereq instr consent;  
Instructor: STAFF  
Description: On-the-job supervised practical experience in the fields of sport and exercise under a specialist in a particular area of study or emphasis.

KIN 3993 Directed Study in Kinesiology  
A-F only, 1-10 credit(s), max credits 10, 10 completions allowed; prereq instr consent;  
Instructor: STAFF  
Description: Student-selected clinical or research experience. Students work with faculty and graduate students on research or scholarly/creative activities. Students usually assist with faculty scholarship or carry out projects of their own under faculty supervision.

KIN 3993H Directed Study in Kinesiology: Honors  
A-F only, 1-10 credit(s), max credits 10, 10 completions allowed; prereq Kin honors, instr consent;  
Instructor: STAFF  
Description: Student selected clinical or research experience.

KIN 4001H Honors Seminar in Kinesiology  
A-F only, 3 credit(s), max credits 6; prereq Kinesiology honors;  
Instructor: STAFF  
Description: Contemporary issues in Kinesiological research. Laboratory rotations, development of UROP project proposal, development of senior thesis topic, advanced study, career opportunities in Kinesiology, special learning opportunities.

KIN 4134 The Aging Motor System  
A-F only, 3 credit(s); prereq [3132, 3135, Kin major] or instr consent;  
Instructor: Wade, Michael G  
Description: Student may contact the instructor or department for information.

KIN 4214 Health Promotion  
A-F only, 3 credit(s); prereq 1871 or instr consent;  
Instructor: Lewis, Beth Ann  
Description: This course provides students with the foundation for developing health promotion programs for disease prevention. The course will include an overview of behavioral and environmental theories related to health promotion program development. The course will focus on the six step process involved in developing and evaluating health promotion programs. Examples of prevention programs will be presented and evaluated including smoking cessation, physical activity, asthma management, and HIV prevention programs. Students will complete a class project that will involve selecting one health promotion area and developing a health promotion program in their area of interest.

KIN 4385 Exercise Physiology  
A-F only, 4 credit(s); prereq [(3385 or PHSL 3051, or equiv), kin major] or instr consent;  
Instructor: Dengel PhD, Donald Robert  
Description: Information and learning experiences will be presented that cover specific areas within the discipline of Exercise Physiology. This course is designed for the advanced undergraduate student in Kinesiology, as well as advanced students in such complementary areas as public health, nutrition, physiology, biology, biochemistry, or any sport-related areas. It creates a great opportunity to combine the science of biological, biochemistry, physics, and physiology with the study of health, fitness, wellness, human performance, and sport. Emphasis is placed on basic human physiological systems and the responses of those systems to the challenge of physical activity: from moderate to extreme intensities. The biochemical bases of these responses will be presented. Historical, psychological, sociological, and philosophical implications of these topics will be integrated into many of the lecture/discussions. In addition to lecture information, students will be provided a "hands on", small group laboratory experience that is carefully orchestrated to track lecture material and presentations.

KIN 4641 Training and Conditioning for Sport  
A-F only, 3 credit(s); prereq [KIN 4385 or exercise physiology course], [upper level undergrad or M.Ed. or grad student];  
Instructor: Ingraham, Stacy Jean  
Description: This course prepares the student to systematically design training and conditioning programs for athletes. This course utilizes periodization models with physiological adaptations to maximize human performance in the athletic arena.  
Style: 80% Lecture, 20% Discussion.  
Grading: 26% final exam, 10% reports/papers, 39% special projects, 16% written homework, 3% in-class presentation, 6% problem solving.

KIN 4697 Student Coaching and Seminar  
S-N only, 3 credit(s); prereq [Coaching minor or certificate] student, GPA of at least 2.50;  
Instructor: Ingraham, Stacy Jean  
Description: Practicum with coinciding seminars.

KIN 4941 Applied Sport Science  
OPT No Aud, 3 credit(s); prereq 4981 or instr consent;  
Instructor: Fitzgerald, John S  
Description: Introduction to varied contributions of sport sciences to athletic performance. Evaluation of historical research's contributions toward modern day research questions.

KIN 4981 Understanding Kinesiology Research  
A-F only, 3 credit(s); prereq Intro statistics recommended;  
Instructor: STAFF  
Description: Prepares students to critically analyze research specific to Kinesiology.

KIN 5001 Foundations of Human Factors/Ergonomics  
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: HUMF 5001;  
Instructor: Smith, Thomas J  
Description: The course will address these issues in the following contexts: Consumer Product Design; Cognitive Performance and Learning, Psychomotor Performance, Behavioral Cybernetics of Human Performance; Effects of Perturbed Sensory Function. This course will address human factors: Machine and Tool Performance; Interactive Performance with Complex Technological Systems (Human/Computer; Human/Robot); Occupational Performance and Safety; Social and Team Performance; Organizational Performance; and Performance of Complex Sociotechnical Systems (Aerospace, Educational, Manufacturing, Transportation, Community and Health Systems).
Field tours of selected private sector operations are provided to complement classroom activities. Course assignments encompass a series of class presentations, reports, and term projects dealing with HF/E analyses of consumer product design, design of complex sociotechnical systems and job/workplace design features and issues. The course represents the core course in the campus-wide, interdisciplinary Human Factors Minor Program, and is intended for graduate and upper-level undergraduate students with an interest in the conceptual and practical aspects of HF/E science.

Style: 40% Lecture, 10% Discussion. student team presentations & field trips
Grading: 90% reports/papers, 10% in-class presentation.
Exam Format: no exams

KIN 5104 Physical Activities for Persons with Disabilities
A-F only, 3 credit(s);
Instructor: Healy,Kathleen Dalton
Description: Different approaches to providing physical education service and related movement interventions for persons with disabilities. Topics: movement behavior foundations, movement skill progressions, unique considerations for specific impairments, and sport for persons with disabilities.

KIN 5111 Sports Facilities
A-F only, 3 credit(s);
Instructor: Turman PhD,James C
Description: An overview of sports facilities including the planning, development, design, construction, and management of such facilities with emphasis on major indoor multipurpose facilities for recreational sports, physical education, and intercollegiate athletics on the college campus and an introduction to public/private arenas and stadiums. Other topic areas may include funding and financing, operations management, marketing, advertising, public relations, and risk management.
Style: 35% Lecture, 20% Discussion, 15% Small Group Activities, 10% Student Presentation, 15% Field Trips, 5% Guest Speakers.
Grading: 17% final exam, 35% reports/papers, 25% special projects, 5% quizzes, 13% written homework, 5% attendance. Note: attendance also includes in-class presentation and participation.
Exam Format: multiple choice, fill-in, matching, and essay

KIN 5122 Applied Exercise Physiology
A-F only, 3 credit(s); prereq 4385 or equiv or instr consent;
Instructor: Burns,Kevin Victor
Description: Metabolic, cardiorespiratory and muscular responses to exercise and exercise training; applications of exercise physiology in disease states and for athletic performance; effects of exercise as a treatment for metabolic and cardiovascular diseases, and obesity; controversial issues in exercise physiology.
Style: 50% Lecture, 10% Discussion, 25% Student Presentation, 15% Guest Speakers.

KIN 5126 Sport Psychology
A-F only, 3 credit(s); prereq 3126W or equiv or instr consent;
Instructor: Weiss,Maureen R
Description: Theory and research in sport psychology. Focus on the psychological study of human behavior in sport and physical activity settings.

KIN 5136 Psychology of Coaching
3 credit(s);
Instructor: LaVo, Nicole Marie
Description: The course is broken down into two components. The first component focuses on helping coaches (and other sport practitioners) develop skills in creating a climate where optimal development, optimal performance and optimal experience occur simultaneously across all competitive levels. Topics covered in this component include coaching philosophy, leadership, communication skills, motivation, and team building. The second component introduces psychological skills training (PST) and ways in which coaches can implement PST in their programs for performance enhancement. This is an applied course. Kin 3126 is strongly recommended as a pre-requisite. This course is invaluable and highly recommended for students in the coaching minor, and for those who are currently coaching or intend to coach. Individuals in the Armed Forces also find this course relevant to leadership and aspects of optimal performance. Experienced coaches (i.e., coaches with some or many years of coaching) find the course insightful and transformative. This course is relevant for anyone who manages, motivates, and tries to help individuals attain optimal performance in any context-not just sports.
Style: 50% Lecture, 5% Film/Video, 15% Discussion, 5% Laboratory, 10% Small Group Activities, 5% Student Presentation, 5% Guest Speakers, 5% Web Based. The course is taught using blended learning and different teaching pedagogies aimed at actively engaging students.
Grading: 15% final exam, 20% reports/papers, 50% reflection paper, 5% in-class presentation, 10% class participation.
Exam Format: short answer, case study, essay

KIN 5141 Nutrition for Health and Physical Performance
A-F only, 3 credit(s); prereq FScN 1112 or equiv;
Instructor: Leon,Arthur S
Description: Requirements and physiologic roles of nutrients and physical activity in promotion of health and performance; assessment of energy requirements. RDAs, food composition and safety, weight management, and prevention of chronic diseases with emphasis on coronary heart disease. Lectures and slide presentations, take-home project self-assessing one's own usual diet and exercise habits. Target audience: advanced undergraduate and graduate students with science background, preferably with a previous nutrition course, majors and non-majors in Kinesiology.
Style: 90% Lecture.
Grading: 40% mid exam, 50% final exam, 10% special projects.
Exam Format: Multiple choice and short answer

KIN 5152 Curriculum Development in Physical Education
A-F only, 2 credit(s); prereq initial licensure/MEd phys ed student;
Instructor: Vogel,Paul Robert
Description: Trends, issues, and challenges in early childhood/K-12 physical education. Potential impact on the curriculum.

KIN 5196 Practicum: Development/Adapted Physical Education
S-N only, 1-4 credit(s), max credits 4, 4 completions allowed; prereq 5103 or concurrent enrollment 5103 or 5104 or concurrent enrollment 5104 or instr consent; KIN undergraduate pre-teaching with sr status are limited to 2 practicum hrs;
Instructor: Braun,Jessica D
Description: Observation of, participation in physical education instruction for students with disabilities. Current issues in developmental/adapted physical education. Exchange of ideas/problems.

KIN 5421 Sport Finance
A-F only, 3 credit(s); prereq Grad student or instr consent;
Instructor: Ross,Stephen D
Description: In recent years, traditional sources of revenue ? tax support, media revenues and gate receipts ? have declined while costs have escalated. Increased demand for state-of-the-art facilities, coupled with an increase in player and operational costs, have forced sport managers to do more with less. This course is designed to provide students with an introduction to financial analysis, including discussion of traditional and innovative revenue producing strategies available to sport organizations. Along with more conventional income sources such as tax support, municipal and corporate bonds, ticket sales, concessions and fund raising, students will receive in-depth exposure to more recent innovations.
KIN 5461 Foundations of Sport Management  
A-F only, 3 credit(s); prereq Kin or rec or postbac or grad student or instr consent ;  
**Instructor:** Eisen, Philip L  
**Description:** Theories/techniques in administration/management of sport enterprises. Organizational theory/policy, practical examples of sport management skills/strategies.

KIN 5485 Advanced Electrocardiogram Interpretation  
A-F only, 3 credit(s); prereq [3385, 4385] or instr consent ;  
**Instructor:** Nelson, Brittney J  
**Description:** Introduction to electrocardiogram. Placement/interpretation, use in clinical exercise testing and exercise prescription. Hands-on experience in electrocardiogram for exercise testing.

KIN 5505 Human-Centered Design - Principles and Applications  
3 credit(s); Credit will not be granted if credit has been received for: KIN 3505;  
**Instructor:** Smith, Thomas J  
**Description:** Human-centered design (also termed user-centered design, usability engineering, human engineering or universal design) is an interdisciplinary area of design study that focuses on how design can be tailored to address, accommodate, and meet human expectations, capabilities, needs, and limitations. The rationale for the course is that: 'good design makes things work better and last longer, helps make people and business more productive, and reduces discomfort and waste.' The basic premise for the course is that 'good' design means human-centered design (HCD). The course will address this premise from a number of different perspectives, considering HCD of fabricated artifacts, human-computer interfaces, built environments, and complex sociotechnical and organizational systems and environments. The course will offer a diverse mix of lecture, open discussion, design analysis projects, guest speakers, field site visits and evaluations, and differing cultural approaches to design.  
**Style:** 40% Lecture, 20% Discussion. student team presentations  
**Grading:** 75% reports/papers, 25% in-class presentation.

KIN 5511 Women in Sport and Leisure  
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: REC 5511;  
**Instructor:** Buysse, Jo Ann  
**Description:** The primary purpose of this course is to provide students with an opportunity to critically examine, understand and appreciate women's involvement in-and contributions to-sport and physical activity from both an historical and contemporary perspective. Students will be expected to analyze, critique, and evaluate a wide range of historical, cultural, economic and socio-psychological issues that have shaped the nature and scope of women's participation in sport, physical activity and leisure. Utilizing feminist perspectives, particular attention will be given to the various ways in which females (and their bodies) are often viewed as fundamentally different-physically, socially and psychologically-from their male counterparts. Much of this analysis will take place against the backdrop of highly organized, competitive sports such as intercollegiate athletics. In addition, we will see how it is impossible to separate women's and men's sports from the broader societal roles of women and men in general. Finally, issues that address race/ethnicity, social class and sexual orientation, and how those issues influence women's and men's sports, will also be emphasized throughout the semester. This course will be web enhanced through webctvista.

**Style:** 50% Lecture, 40% Discussion.  
**Grading:** 25% mid exam, 45% reports/papers, 10% in-class presentation, 20% class participation.  
**Exam Format:** essay

KIN 5631 Programming and Promotion in Sport  
A-F only, 3 credit(s); prereq Kin or Rec grad student or instr consent ;  
**Instructor:** Ross, Stephen D  
**Description:** While sport promoters can be traced as far back as early 20th century boxing matches, sport marketing as a concept has just recently been credited with the sudden rise in industrial interest. Although the sport industry is still in it's early growth period, it has experienced extreme financial prosperity. Largely responsible for the increased popularity and revenue gain of the field is sport marketing. This course is designed to introduce marketing concepts as they apply to the sport industry. Topics such as consumer behavior, market research, the marketing mix and licensing will be covered through the use of interactive discussion and practical application.

KIN 5696 Practicum in Kinesiology  
S-N only, 1-6 credit(s), max credits 6, 6 completions allowed; prereq [Kin MEd or grad student], instr consent ;  
**Instructor:** Buyse, Jo Ann  
**Description:** Practical experience in kinesiology under supervision of a University faculty member and an agency supervisor.

KIN 5696 Practicum in Kinesiology  
S-N only, 1-6 credit(s), max credits 6, 6 completions allowed; prereq [Kin MEd or grad student], instr consent ;  
**Instructor:** Ingraham, Stacy Jean  
**Description:** Practical experience in Kinesiology under supervision of a University adviser and an agency supervisor.

KIN 5696 Practicum in Kinesiology  
S-N only, 1-6 credit(s), max credits 6, 6 completions allowed; prereq [Kin MEd or grad student], instr consent ;  
**Instructor:** Allison, John P  
**Description:** Practical experience in Kinesiology under supervision of a University adviser and an agency supervisor.

KIN 5696 Practicum in Kinesiology  
S-N only, 1-6 credit(s), max credits 6, 6 completions allowed; prereq [Kin MEd or grad student], instr consent ;  
**Instructor:** Leon, Arthur S  
**Description:** Practical experience in Kinesiology under supervision of a University faculty member and an agency supervisor.

KIN 5696 Practicum in Kinesiology  
S-N only, 1-6 credit(s), max credits 6, 6 completions allowed; prereq [Kin MEd or grad student], instr consent ;  
**Instructor:** Bronas, Ulf Gunnar  
**Description:** Practical experience in kinesiology under supervision of a University faculty member and an agency supervisor.

KIN 5696 Practicum in Kinesiology  
S-N only, 1-6 credit(s), max credits 6, 6 completions allowed; prereq [Kin MEd or grad student], instr consent ;  
**Instructor:** Ross, Stephen D  
**Description:** Practical experience in kinesiology under supervision of a University faculty member and an agency supervisor.

KIN 5696 Practicum in Kinesiology  
S-N only, 1-6 credit(s), max credits 6, 6 completions allowed; prereq [Kin MEd or grad student], instr consent ;  
**Instructor:** Kihl, Lisa A  
**Description:** Practicum offers students opportunities to work in a professional environment under the guidance of professionals. This professional experience should be completed near the completion of your M.Ed. program (completed 15 credits or more) as a culmination of your education and experience. Practicum should be viewed as a transition step between a student?'s education and their professional career. Typically the practicum offers a level of responsibility that allows a student to develop professional skills in the field/industry while offering the student training and supervision, which allows them to practically apply previously studied theory. Course information at http://intranet.kin.umn.edu/practicum/
prereq [Kin MEd or grad student], instr consent;
Instructor: Brownlee, Eric A
Description: Practical experience in kinesiology under supervision of a University faculty member and an agency supervisor

KIN 5723 Psychology of Sport Injury
3 credit(s); prereq Intro psych course;
Instructor: Wiese-Bjornstal PhD, Diane M.
Description: This course includes content on the psychosocial bases of the following: risk factors preceding sport injury, responses to the occurrence of sport injury, and the rehabilitation process. Content of the course includes both the theoretical and research foundations of sport injury psychology as well as the practical implications of this knowledge. Structure of the course includes lectures, discussions, guest lecturers, videos, and student presentations. The target audience encompasses both sport psychology graduate students and applied practitioners working with sportsmedicine situations (such as athletic trainers, physical therapists, coaches, and sport psychology consultants). This course will be web enhanced via WebCT.

Style: 60% Lecture, 20% Discussion. video and other media; student presentations
Grading: 20% mid exam, 20% final exam, 40% reports/papers, 10% in-class presentation, 10% class participation.
Exam Format: Mixed method; typically a combination of multiple choice and essay questions

KIN 5801 Legal Aspects of Sport and Recreation
A-F only, 4 credit(s); prereq Kin or rec major;
Instructor: Loher JD, Vickie Lynn
Description: Legal issues related to recreation, park, and sport programs/facilities with public/private sectors.

KIN 5981 Research Methodology in Kinesiology, Recreation, and Sport
A-F only, 3 credit(s); prereq 3151 or equiv; Credit will not be granted if credit has been received for: REC 5981;
Instructor: Kihl, Lisa A
Description: Defines/reviews various types of research in exercise and sport science, physical education, and recreation studies. Qualitative research, field studies, and introspective research strategies as alternatives to traditional scientific paradigm.

KIN 5992 Readings in Kinesiology
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed;
prereq [KIN upper div undergrad or MEd or grad student], instr consent;
Instructor: Rodgerson, Richard W
Description: Independent study under tutorial guidance.

KIN 5992 Readings in Kinesiology
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed;
prereq [KIN upper div undergrad or MEd or grad student], instr consent;
Instructor: Lewis, Beth Ann
Description: Independent study under tutorial guidance.

KIN 5992 Readings in Kinesiology
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed;
prereq [KIN upper div undergrad or MEd or grad student], instr consent;
Instructor: LaVo, Nicole Marie
Description: Independent study under tutorial guidance.

KIN 5992 Readings in Kinesiology
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed;
prereq [KIN upper div undergrad or MEd or grad student], instr consent;
Instructor: Ingraham, Stacy Jean
Description: Independent study under tutorial guidance.

KIN 5992 Readings in Kinesiology
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed;
prereq [KIN upper div undergrad or MEd or grad student],
KIN 5995 Research Problems in Kinesiology
S-N only, 1-9 credit(s), max credits 9, 9 completions allowed;
prereq Kin PhD student, instr consent;
Instructor: STAFF
Description: Individual scholarly research.

KOR 1011 Beginning Korean
5 credit(s); Credit will not be granted if credit has been received for: KOR 4001;
Instructor: Cho,Hangtae
Description: This course is the first of a two-semester sequence of Beginning Korean; it is designed for true beginners or non-heritage learners who have no or little background knowledge of Korean. It aims to begin developing the four communication skills (speaking, listening, reading and writing) in Korean. It covers the basic grammatical structures and vocabulary necessary for basic conversation, reading comprehension, and writing to have the students build a solid foundation for further study in the Korean language. The course also provides useful information concerning culture (where culture touches on language and communication) and everyday life in Korea. After completing this course, a student should be able 1) to maintain simple face-to-face conversation by asking and answering simple questions in Korean, 2) to comprehend the learned materials, 3) to write simple sentences and expressions, and 4) to comprehend simple texts with limited vocabulary.

KOR 3021 Intermediate Korean
5 credit(s); Credit will not be granted if credit has been received for: KOR 4003;
Instructor: Yoon,Sang-Seok
Description: Student may contact the instructor or department for information.

KOR 3031 Third Year Korean
4 credit(s); prereq 3022;
Instructor: Cho,Hangtae
Description: Student may contact the instructor or department for information.

KOR 3290 Korean Language Teaching Tutorial
S-N only, 1 credit(s), max credits 2; prereq Grade of A in 3032;
Instructor: Cho,Hangtae
Description: Student may contact the instructor or department for information.

KOR 3993 Directed Studies
1-3 credit(s), max credits 12, 4 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Cho,Hangtae
Description: Student may contact the instructor or department for information.

KOR 3993 Directed Studies
1-3 credit(s), max credits 12, 4 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Workman,Travis James
Description: Student may contact the instructor or department for information.
KOR 4001 Beginning Korean
3 credit(s); prerequisite Grad student; Credit will not be granted if credit has been received for: KOR 1011;
Instructor: Cho, Hangtae
Description: This course is the first of a two-semester sequence of Beginning Korean; it is designed for true beginners or non-heritage learners who have no or little background knowledge of Korean. It aims to begin developing the four communication skills (speaking, listening, reading, and writing) in Korean. It covers the basic grammatical structures and vocabulary necessary for basic conversation, reading comprehension, and writing to have the students build a solid foundation for further study in the Korean language. The course also provides useful information concerning culture (where culture touches on language and communication) and everyday life in Korea. After completing this course, a student should be able 1) to maintain simple face-to-face conversation by asking and answering simple questions in Korean, 2) to comprehend the learned materials, 3) to write simple sentences and expressions, and 4) to comprehend simple texts with limited vocabulary.

KOR 4000 Intermediate Korean
3 credit(s); prerequisite Grad student; Credit will not be granted if credit has been received for: KOR 3021;
Instructor: Yoon, Sang-Seok
Description: Student may contact the instructor or department for information.

KOR 4005 Third Year Korean
3 credit(s); prerequisite 4004, grad student;
Instructor: Cho, Hangtae
Description: Student may contact the instructor or department for information.

KOR 4041 Advanced Readings in Modern Korean
4 credit(s); prerequisite 3032 or equiv or instr consent;
Instructor: Yoon, Sang-Seok
Description: Student may contact the instructor or department for information.

KOR 5140 Readings in Sino-Korean Texts
3 credit(s), max credits 9, 3 completions allowed; prerequisite 3032 or equiv or instr consent;
Instructor: Cho, Hangtae
Description: This course is designed to increase the students' proficiency to advanced-high level in all aspects of modern Korean with a special emphasis on Sino Korean; Sino-Korean vocabulary and characters are necessary for advanced and superior level of knowledge in Korean. Sino-Korean characters are used differently from the same Chinese characters used in contemporary China in terms of pronunciation, meaning, and word formation. This course aims to prepare students for research or employment in a variety of Korea-related fields. Text materials are drawn from authentic sources including modern Korean literature, film, intellectual history, and readings on contemporary issues. Radio and TV broadcasts will also be included in the teaching materials. Texts will be selected, in part, according to student interests. With the instructor's guidance, students will conduct research projects based on specialized readings in their own fields of study. The research projects will be presented both orally and in written form at the end of the semester. This course will be mostly taught in Korean. 3 repeats are allowed.

Labrotary Medicine and Pathology
760 Mayo (MMC 609)

LAMP 5100 General and Systemic Pathology for Dental Students
A-F only, 3 credit(s); prerequisite Registered dental student;
Instructor: Lebahn, Fran
Description: Student may contact the instructor or department for information.

Land and Atmospheric Science
439 Borlaug Hall

LAAS 5050 Integrated Topics in Land & Atmospheric Science
A-F only, 3 credit(s);
Instructor: Nater, Ed
Description: Student may contact the instructor or department for information.

LAAS 5311 Soil Chemistry and Mineralogy
3 credit(s); prerequisite [[Chem 1022 or equiv], Phys 1102, grad] or instr consent;
Instructor: Toner, Brandy Marie
Style: We will meet MW 4:00-5:30pm

LAAS 5425 Atmospheric Processes I: Thermodynamics and Dynamics of the Atmosphere
A-F only, 3 credit(s);
Instructor: Snyder, Peter K
Description: Student may contact the instructor or department for information.

LAAS 8128 Seminar in Soils
S-N only, 1 credit(s), max credits 2;
Instructor: Yoo, Kyungsoo
Description: Student may contact the instructor or department for information.

LAAS 8195 Research Problems in Soils
1-5 credit(s), max credits 10, 10 completions allowed; prerequisite [[Grad major in soil sci or related field], instr consent];
Instructor: Nater, Ed
Description: Student may contact the instructor or department for information.

LAAS 8550 Teaching Experience
S-N only, 1 credit(s), max credits 6, 6 completions allowed;
prerequisite Grad major in soil sci or related field, instr consent;
Instructor: Allan, Deborah L
Description: Student may contact the instructor or department for information.
**LA 1201 Learning from the Landscape**  
A-F only, 3 credit(s); Meets CLE req of Arts/Humanities; meets CLE req of Diversity and Soc Justice US;  
Instructor: Nunnally, Patrick  
Description: This course is designed to give students an understanding of why the landscape around us looks the way it does. What do our cities, parks, farms, and small towns say about who we are and what we think is important? How do people make homes for themselves, establish public spaces, and understand the meanings of places in the American landscape? What contributions have various racial, ethnic, and class-based groups made to the contemporary American landscape? Lectures are heavily illustrated, and there are two field exercises that invite students to explore the nearby landscape. Course meets the CLE Cultural Diversity requirement.  
Style: 80% Lecture, 20% Discussion.  
Grading: 2 midterms, 2 exercises, final exam (all 20%), several small homework assignments are also required.  
Exam Format: Short answer

**LA 1301 Introduction to Landscape Architecture Drawing**  
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: LA 5301; Meets CLE req of Arts/Humanities;  
Instructor: Agee, Bradley Steele  
Description: Classroom and homework projects will focus on exploring landscape space and organization through the completion of assigned exercises and work in your sketch journal. Progress will be evaluated and guidance offered during classroom critique. You will be expected to work in class, so be sure that you bring your materials to class unless notified otherwise. The class will consist of classroom drawing exercises, lectures, demonstrations, and reviews of students work. Weekly assignments will typically be given on Monday to be completed Wednesday depending upon the nature of the assignment.  
Grading: 60% special projects, 20% laboratory evaluation, 20% other evaluation. Sketch journal

**LA 1301 Introduction to Landscape Architecture Drawing**  
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: LA 5301; Meets CLE req of Arts/Humanities;  
Instructor: Abbott, Dean Frederick  
Description: Student may contact the instructor or department for information.

**LA 2301 Advanced Representation for Environmental Design**  
3 credit(s); prereq 1301;  
Instructor: Krause, Karl William  
Description: Student may contact the instructor or department for information.

**LA 3001 Understanding and Creating Landscape Space**  
A-F only, 3 credit(s); prereq B.E.D major or pre-LA student or instr consent;  
Instructor: Agee, Bradley Steele  
Description: Introduction to spatial design issues at all scales.

**LA 3003 Case Studies in Sustainable Landscape Planning and Design**  
3 credit(s);  
Instructor: Raab, Kristin Kelly  
Description: Sustainable landscape design/planning practices. Integrative potential between practices/changes in global biodiversity, quality of air/water resources, development/consumption of resources, and climate. Selection, deployment, and management of sustainable design.

**LA 3571 Landscape Construction: Site Systems and Engineering**  
A-F only, 3 credit(s); prereq BED major or BED minor or instr consent;  
Instructor: Bloch, Zachary Sanders  
Description: Student may contact the instructor or department for information.

**LA 4096 Internship in Landscape Design and Planning**  
S-N only, 1 credit(s); prereq 1301, 2301, 2302, 3001, 3002, 3003;  
Instructor: Agee, Bradley Steele  
Description: Student may contact the instructor or department for information.

**LA 4755 Infrastructure, Natural Systems, and Space of Inhabited Landscapes**  
A-F only, 3 credit(s); prereq credit will not be granted if credit already received for: LA 4712 or 5712 Jr or Sr Jr or Sr Jr or Sr; Credit will not be granted if credit has been received for: LA 5755; Meets CLE req of Technology and Society;  
Instructor: Lehman, Barry  
Description: With over half of the world’s population now living in cities, the practices of integrated urbanism to create eco-cities is a promising solution to mitigate climate change and our ecological impact. INFRASTRUCTURE, NATURAL SYSTEMS, AND THE SPACE OF INHABITED LANDSCAPES is an upper level seminar exploring cross-disciplinary solutions to mitigate and reverse the adverse anthropogenic impacts on our planet through deploying technological solutions to the design of green infrastructural systems that integrate regenerative ecosystem services into our settlements. LA 4755/5755 explores the systems, metrics, policies, methodology, and practices to create sustainable cities and to integrate natural systems into the built environment. INFRASTRUCTURE covered includes: transportation/logistics systems; water purification, storage and distribution; energy generation and transmission; waste reuse/recycling/disposal; communication and environmental sensors/feedback and more. NATURAL SYSTEMS covered includes: integrating vegetation into the built environment, urban agriculture, treatment wetlands, wildlife habitat and more. Infrastructural systems are typically engineered to optimize a single function and to exclude cultural uses and public access. As big industrial infrastructural systems get integrated into the urban realm, they must be altered to accommodate a wide range of uses in THE SPACE OF INHABITED LANDSCAPES. As a CLE Technology and Society course, LA 4755 will help students understand: - How infrastructural technology shapes our cities and society; - The role of policy and regulations in shaping infrastructural technology and urban form; - The basic science of climate change and adverse environmental impact of humans; - Ethical implications of climate change and growing human population; - Basic engineering principals and practices behind energy generation and transmission, transportation, water purification and distribution, food production and distribution, waste disposal and re-use, and alternate systems to these infrastructures; - Multiple perspectives on the role of citizens and users versus the utilities and state in developing green infrastructure technologies, and the process for deploying new systems; - How to evaluate conflicting views about infrastructural technologies; - How to evaluate existing power, water, food, and transit technology as well as develop a new framework to evaluate emerging technologies. … The weekly lectures will have a mix of guest speakers, group discussions, workshops, film/videos, and a field trip. The recitation sessions will focus on discussing the assigned readings and assignment. LA5755 is open to graduate students from throughout the university. Graduate students are required to teach one recitation session, and complete additional course work. This course is paperless.  
Style: 50% Lecture, 5% Film/Video, 25% Discussion, 5% Student Presentation, 5% Field Trips, 10% Guest Speakers.  
Grading: 70% reports/papers, 10% in-class presentation, 20% class participation. Environmental Footprinting assignment 10% Policy Statement 10% Career Path Assignment 10% Final project 50% Extra credit opportunities are available.
LA 5201 Making Landscape Spaces and Types
A-F only, 6 credit(s); prereq B.E.D. accelerated status or LA grad or instr consent;
Instructor: Koepke, John Albert
Description: Student may contact the instructor or department for information.

LA 5202 Landscape Analysis Workshop
S-N only, 1 credit(s);
Instructor: Koepke, John Albert
Description: Student may contact the instructor or department for information.

LA 5301 Introduction to Landscape Architecture Drawing
3 credit(s); prereq LA grad student or accelerated B.E.D. student; Credit will not be granted if credit has been received for: LA 1301;
Instructor: Koepke, John Albert
Description: Student may contact the instructor or department for information.

LA 5371 Computer Methods I
S-N only, 1 credit(s); prereq B.E.D. accelerated status or LA grad or instr consent; Credit will not be granted if credit has been received for: ARCH 5371;
Instructor: Lochner, Joe Donald
Description: Student may contact the instructor or department for information.

LA 5374 Representation for Landscape Architectural Construction
3 credit(s);
Instructor: de Britto, Vincent P
Description: Student may contact the instructor or department for information.

LA 5401 Directed Studies in Emerging Areas of Landscape Architecture
1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Martin, Roger B
Description: Student may contact the instructor or department for information.

LA 5402 Directed Studies in Emerging Areas of Landscape Architecture
1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Koepke, John Albert
Description: Student may contact the instructor or department for information.

LA 5402 Directed Studies in Emerging Areas of Landscape Architecture
1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Galatowitsch, Susan M
Description: Student may contact the instructor or department for information.

LA 5402 Directed Studies in Emerging Areas of Landscape Architecture
1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Pitt, David George
Description: Student may contact the instructor or department for information.

LA 5401 Directed Studies in Emerging Areas of Landscape Architecture
1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Neckar, Lance M
Description: Student may contact the instructor or department for information.

LA 5401 Directed Studies in Emerging Areas of Landscape Architecture
1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Hewitt, Clinton N
Description: Student may contact the instructor or department for information.

LA 5401 Directed Studies in Emerging Areas of Landscape Architecture
1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Sykes, Robert D
Description: Student may contact the instructor or department for information.

LA 5401 Directed Studies in Emerging Areas of Landscape Architecture
1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Miller, Kristine Frances
Description: Student may contact the instructor or department for information.

LA 5401 Directed Studies in Emerging Areas of Landscape Architecture
1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Koepke, John Albert
Description: Student may contact the instructor or department for information.

LA 5401 Directed Studies in Emerging Areas of Landscape Architecture
1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
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Description: Student may contact the instructor or department for information.

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1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
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LA 5401 Directed Studies in Emerging Areas of Landscape Architecture
1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Koepke, John Albert
Description: Student may contact the instructor or department for information.
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<td>LA 5405</td>
<td>Interdisciplinary Studies in Landscape Architecture</td>
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<td>A-F only, 1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent;</td>
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Instructor: Martin, Roger B
Description: Research, planning, and/or design project. Topics may include energy efficient design, ecological dimension of design, historic preservation, downtown revitalization, agricultural land use, computerized land use planning, transportation and infrastructure housing.

LA 5405 Interdisciplinary Studies in Landscape Architecture
A-F only, 1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Koepke, John Albert
Description: Research, planning, and/or design project. Topics may include energy efficient design, ecological dimensions of design, historic preservation, downtown revitalization, agricultural land use, computerized land use planning, transportation, and infrastructure housing.

LA 5405 Interdisciplinary Studies in Landscape Architecture
A-F only, 1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Galatowitsch, Susan M
Description: Research, planning, and/or design projects. Topics vary.

LA 5405 Interdisciplinary Studies in Landscape Architecture
A-F only, 1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Pitt, David George
Description: Research, planning, and/or design projects. Topics vary.

LA 5405 Interdisciplinary Studies in Landscape Architecture
A-F only, 1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Neckar, Lance M
Description: Research, planning, and/or design projects. Topics vary.

LA 5405 Interdisciplinary Studies in Landscape Architecture
A-F only, 1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Hewitt, Clinton N
Description: Student may contact the instructor or department for information.

LA 5405 Interdisciplinary Studies in Landscape Architecture
A-F only, 1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Sykes, Robert D
Description: Research, planning, and/or design projects. Topics vary.

LA 5405 Interdisciplinary Studies in Landscape Architecture
A-F only, 1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Miller, Kristine Frances
Description: Student may contact the instructor or department for information.

LA 5405 Interdisciplinary Studies in Landscape Architecture
A-F only, 1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Musacchio, Laura R
Description: Student may contact the instructor or department for information.

LA 5571 Landscape Construction: Landform Systems and Spatial Performance
A-F only, 3 credit(s); prereq Accelerated BED student or LA grad student;
Instructor: Favour, Joseph Richard
Description: Theory and professional applications of landform systems for design. Topics include typology, representation methods, manipulation techniques, use of land survey data, earthwork construction issues, and spatial accommodation of vehicles in landscape architecture, including road design.

LA 5572 Plants in Design
A-F only, 3 credit(s); prereq [5201, 5203, plant identification course] or instr consent;
Instructor: Krinke, Rebecca Jean
Description: Student may contact the instructor or department for information.

LA 5574 Identification of Minnesota Flora
A-F only, 3 credit(s); prereq BED accelerated status or LA grad student or instr consent;
Instructor: Shaw, Daniel Byron
Description: Student may contact the instructor or department for information.

LA 5755 Infrastructure, Natural Systems and the Space of Inhabited Landscapes
A-F only, 3 credit(s); prereq Grad student credit will not be granted if credit already received for: LA 4712, LA 5712; Credit will not be granted if credit has been received for: LA 4755;
Instructor: Lehman, Barry
Description: Student may contact the instructor or department for information.

LA 8201 Designing Landscapes for Dwelling and Settlement
A-F only, 6 credit(s); prereq 5203, 5571, grad LA major, concurrent enrollment 8202 or instr consent;
Instructor: Favour, Joseph Richard
Description: Student may contact the instructor or department for information.

LA 8203 Making Regional Landscape Space
A-F only, 6 credit(s); prereq 8202, grad LA major, concurrent enrollment 8204 or instr consent;
Instructor: Favour, Joseph Richard
Description: A problem-oriented workshop about how landscape ecology, restoration ecology, landscape perception, regional economics, and public policy inform design and planning decision-making in urban and regional landscapes. Geographic information systems and remote sensing are used as an analysis, planning, and design tool.

LA 8206 Making Urban Landscape Space
A-F only, 6 credit(s); prereq MLA grad student;
Instructor: Lapp, Cynthia Jeanne
Description: Student may contact the instructor or department for information.

LA 8301 Landscape Architecture: Research Issues and Methods
A-F only, 3 credit(s); prereq 8201 or concurrent enrollment 8201, grad LA major or instr consent;
Instructor: Miller, Kristine Frances
Description: Student may contact the instructor or department for information.

LA 8401 Directed Studies in Emerging Areas of Landscape Architecture
1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent;
Instructor: Martin, Roger B
Description: Student may contact the instructor or department for information.
LA 8401 Directed Studies in Emerging Areas of Landscape Architecture
1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent
Instructor: Koepke, John Albert
Description: Student may contact the instructor or department for information.

LA 8401 Directed Studies in Emerging Areas of Landscape Architecture
1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent
Instructor: Gaiatowitsch, Susan M
Description: Student may contact the instructor or department for information.

LA 8401 Directed Studies in Emerging Areas of Landscape Architecture
1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent
Instructor: Pitt, David George
Description: Student may contact the instructor or department for information.

LA 8401 Directed Studies in Emerging Areas of Landscape Architecture
1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent
Instructor: Neckar, Lance M
Description: Student may contact the instructor or department for information.

LA 8401 Directed Studies in Emerging Areas of Landscape Architecture
1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent
Instructor: Sykes, Robert D
Description: Student may contact the instructor or department for information.

LA 8401 Directed Studies in Emerging Areas of Landscape Architecture
1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent
Instructor: Miller, Kristine Frances
Description: Student may contact the instructor or department for information.

LA 8401 Directed Studies in Emerging Areas of Landscape Architecture
1-6 credit(s), max credits 12, 12 completions allowed; prereq instr consent
Instructor: Musacchio, Laura R
Description: Student may contact the instructor or department for information.

LA 8402 Directed Studies in Landscape Architecture History and Theory
1-6 credit(s), max credits 12, 12 completions allowed; prereq Grad LA major or instr consent
Instructor: Krinke, Rebecca Jean
Description: Student may contact the instructor or department for information.

LA 8402 Directed Studies in Landscape Architecture History and Theory
1-6 credit(s), max credits 12, 12 completions allowed; prereq Grad LA major or instr consent
Instructor: Galatowitsch, Susan M
Description: Student may contact the instructor or department for information.

LA 8402 Directed Studies in Landscape Architecture History and Theory
1-6 credit(s), max credits 12, 12 completions allowed; prereq Grad LA major or instr consent
Instructor: Pitt, David George
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LA 8402 Directed Studies in Landscape Architecture History and Theory
1-6 credit(s), max credits 12, 12 completions allowed; prereq Grad LA major or instr consent
Instructor: Neckar, Lance M
Description: Student may contact the instructor or department for information.

LA 8402 Directed Studies in Landscape Architecture History and Theory
1-6 credit(s), max credits 12, 12 completions allowed; prereq Grad LA major or instr consent
Instructor: Sykes, Robert D
Description: Student may contact the instructor or department for information.

LA 8402 Directed Studies in Landscape Architecture History and Theory
1-6 credit(s), max credits 12, 12 completions allowed; prereq Grad LA major or instr consent
Instructor: Miller, Kristine Frances
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LA 8402 Directed Studies in Landscape Architecture History and Theory
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Instructor: Musacchio, Laura R
Description: Student may contact the instructor or department for information.

LA 8402 Directed Studies in Landscape Architecture History and Theory
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<td>Koepke, John Albert</td>
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<td>Grad LA major or instr consent; Student may contact the instructor or department for information.</td>
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<td>Directed Studies in Landscape Architecture</td>
<td>Neckar, Lance M</td>
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<td>Pitt, David George</td>
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<td>LA 8403</td>
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<td>Sykes, Robert D</td>
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<td>Grad LA major or instr consent; Student may contact the instructor or department for information.</td>
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<td>Miller, Kristine Frances</td>
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for information.

### Latin

#### 245 Nicholson Hall

**LAT 1001 Beginning Latin I**

- 5 credit(s); Credit will not be granted if credit has been received for: LAT 5001;
- Instructor: STAFF
- **Description:** Latin, the language of the ancient Romans, has served as a means of communication for well over two thousand years. It is not only the chief language of one of the world's major civilizations, but also an international language for centuries after Rome's fall, the ancestor of the Romance languages, and an important influence on English. The aim of Beginning Latin is to prepare you to read unadapted Latin texts by providing a solid grounding in grammar and vocabulary along with oral and written practice. With this foundation you will be able to read a wide range of ancient, medieval, and Renaissance authors. In addition, Latin 1001 will help strengthen your grasp of English grammar and vocabulary. There is no prerequisite for this course.
- **Style:** 50% Lecture, 50% Discussion. recitation
- **Exam Format:** translation, grammar

#### LAT 3003 Intermediate Latin Prose

- 4 credit(s); prereq Grade of at least [C- or S] in [1002 or 5001] or instr consent credit will not be granted if credit already received for: Lat 3113; Credit will not be granted if credit has been received for: LAT 5003;
- Instructor: STAFF
- **Description:** An introduction to reading unadapted Latin prose from classical authors such as Cicero, Cicero and Pliny. The course includes some grammar review but also considers literary issues (e.g. conventions of public speaking, Roman letters as a genre) and situates the works we study in their historical context.
- **Exam Format:** Translation/comment

#### LAT 5003 Intermediate Latin Prose: Graduate Student

- 3 credit(s); prereq [Grade of at least [C- or S] in [1002 or 5001] or instr consent ]; grad student credit will not be granted if credit already received for: Lat 3113; lat 3120; Credit will not be granted if credit has been received for: LAT 3003;
- Instructor: Smith, Stephen
- **Description:** Student may contact the instructor or department for information.

#### LAT 5003 Intermediate Latin Prose: Graduate Student

- 3 credit(s); prereq [Grade of at least [C- or S] in [1002 or 5001] or instr consent ]; grad student credit will not be granted if credit already received for: Lat 3113; lat 3120; Credit will not be granted if credit has been received for: LAT 3003;
- Instructor: Cole, Spencer E
- **Description:** Student may contact the instructor or department for information.

#### LAT 5100 Advanced Reading

- 3 credit(s), max credits 16, 6 completions allowed; prereq [[3004 or equiv], at least 2 yrs of college level Latin] or instr consent ;
- Instructor: Gallia, Andrew B
- **Description:** Apart from Cicero and Vergil, few Latin authors have enjoyed the fame and influence of the historian Titus Livius. In this course, we will read extensively from book six of Livy's monumental Ab urbe condita. Additional readings and discussion will be used to situate the author and his text in their literary and historical context.

#### LAT 8200 Readings in Latin Verse

- 3 credit(s), max credits 18, 6 completions allowed; prereq Advanced grad student;
Latin American Studies
214 Social Sciences Tower

LAS 3401W Early Latin America to 1825
A-F only, 4 credit(s); Credit will not be granted if credit has been received for: HIST 3401W; Meets CLE req of Global Perspectives; meets CLE req of Historical Perspectives; meets CLE req of Writing Intensive;
Instructor: Chambers, Sarah C
Description: In the past two decades, there has been a creative explosion of films and documentaries representing women in Latin America, past and present. This course begins with pre-contact Native American societies, but primarily explores the historical processes of colonialism in Latin America (especially Mexico, Brazil and Peru) between 1492 and 1825. We will study both the economic, religious, and administrative systems put in place by the Europeans, and the varied responses of indigenous peasants, African slaves, racially-mixed townswellers, and women. We will learn to analyze primary documents from the period (such as the competing accounts of the conquest of Mexico) and read life stories as well as historical narratives. All students register for a discussion section.
Style: 65% Lecture, 35% Discussion.
Grading: 20% final exam, 50% reports/papers, 15% quizzes, 15% class participation.
Exam Format: i.d. terms and short essays

LAS 3429 Latin American History in Film and Text
3 credit(s); Credit will not be granted if credit has been received for: HIST 3429; Meets CLE req of Arts/Humanities; meets CLE req of Global Perspectives;
Instructor: Chambers, Sarah C
Description: In the past two decades, there has been a creative explosion of films and documentaries representing women in Latin America, past and present. This course begins with pre-contact Native American societies, but primarily explores the historical processes of colonialism in Latin America (especially Mexico, Brazil and Peru) between 1492 and 1825. We will study both the economic, religious, and administrative systems put in place by the Europeans, and the varied responses of indigenous peasants, African slaves, racially-mixed townswellers, and women. We will learn to analyze primary documents from the period (such as the competing accounts of the conquest of Mexico) and read life stories as well as historical narratives. All students register for a discussion section.
Style: 20% Lecture, 30% Discussion. viewing films
Grading: 40% reports/papers, 20% class participation, 40% other evaluation. written reactions to films and readings

Law School
285 Mondale Hall

LAW 6030 Contemporary Problems in Freedom on Speech and Press
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: JOUR 5777;
Instructor: STAFF
Description: The educational goals of this clinic are knowledge, understanding of, and the ability to practice in a criminal justice system. This course involves the supervised prosecution of individuals charged with petty misdemeanors, misdemeanors, and gross misdemeanors in Ramsey and Hennepin County District Court. Prosecution students are supervised by prosecutors in several different jurisdictions in Hennepin and Ramsey District Court. Students handle cases at all stages of the criminal process, including arraignments, pretrial conferences and court trials. The weekly two-hour class component of the clinic includes lectures, simulations and role playing. The lectures are on substantive and procedural aspects of criminal law, and on skills performance. The simulations and role playing involve the pre-trial and trial skills necessary to be an effective advocate in the criminal justice system. The students are also required to participate in one ride-along with a police department.
Prerequisites: None

Learning and Academic Skills
104 Eddy Hall

LASK 1001 Mastering Skills for College Success
2 credit(s);
Instructor: Slattery, William Scott
Description: Study smarter ... not harder. Despite being bright and working hard, many students at the U, find they are unable to get the most out of their academic efforts; working hard doesn't always translate into the grades and performance they are looking for: LASK 1001 [Mastering Skills for College Success] was designed to address skills, strategies and approaches to help students become more efficient & effective in their academic efforts. The course focuses on 5 key areas for academic success: 1. Active Learning approaches; 2. Self-awareness & Learning Style; 3. Academic Skills (in areas such as note taking, exams, memory, reading, papers, etc.); 4. Balance Skills (in areas such as time & stress management); and, 5. Engagement & Campus Resources (awareness &
University of Minnesota - Course Guide for Twin Cities Campus

Fall 2011

Liberal Studies

20 Classroom Office Building

LS 5100 Liberal Studies Seminar: Human Potential
A-F only, 3 credit(s), max credits 24, 24 completions allowed; prereq dept consent
Description: What does it mean to produce new knowledge and build understanding in an increasingly complex world? Numerous factors contribute to how we create meaning and engage the process of interpreting and guiding our lives, consciously and unconsciously, in individual and societal contexts. Educational historian Lawrence Cremin describes this phenomenon as the “ecology of learning.” Constructing and manifesting meaning in our lives is a complex process that engages a rigorously interdisciplinary curiosity. The ability to innovate, generate new meanings, tolerate ambiguity, demonstrate authenticity and personal courage are important outcomes of actively engaging the process of meaning making. Understanding this process is central to participating in an increasingly dynamic social environment where novel forms of knowledge construction are rapidly emerging and desperately needed. Explore contexts in which meaning emerges, illuminate this discovery process, and assist participants to become aware of the conscious and unconscious determinants that create the fabric of meaning. Employ an interdisciplinary approach that integrates such diverse topics as sensory perception, infant patterning, neural programming, limbic system resonance, family values, and the influence of place, religion, propaganda, fine art, social control, cultural influences, and unconscious biases to explore this ecology of learning. Learn to “step out” of your everyday habitual patterns of interpreting life’s events and learn methods of consciously participating in the process of creating meaning.

LS 5100 Liberal Studies Seminar: Introduction to Innovation Studies
A-F only, 1-4 credit(s), max credits 24, 24 completions allowed; prereq dept consent
Description: b>Introduction to Innovation<b> This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit “Class URL” for ODL policies, including fee and financial aid restrictions. Presents key Innovation Studies models and demonstrates how these models support individualized learning and leadership processes while being broadly based dynamic and collaborative. The models contribute to innovative self and team leadership strategies, define and apply just-in-time knowledge, and support lifelong self-improvement skills.
Style: 100% Web Based.
Grading: 40% report/papers, Discussion posts on readings (12%), Research and discussion posts on innovation Web sites (12%), -10 innovation simulations (10%) -12 skills exercises (12%) -14 evaluations (14%)
Instructor: Tomsyck,John Peter

LS 5100 Liberal Studies Seminar: Psychology of Sustainability
A-F only, 2 credit(s), max credits 24, 24 completions allowed; prereq dept consent
Description: What does it mean to produce new knowledge and build understanding in an increasingly complex world? Numerous factors contribute to how we create meaning and engage the process of interpreting and guiding our lives, consciously and unconsciously, in individual and societal contexts. Educational historian Lawrence Cremin describes this phenomenon as the “ecology of learning.” Constructing and manifesting meaning in our lives is a complex process that engages a rigorously interdisciplinary curiosity. The ability to innovate, generate new meanings, tolerate ambiguity, demonstrate authenticity and personal courage are important outcomes of actively engaging the process of meaning making. Understanding this process is central to participating in an increasingly dynamic social environment where novel forms of knowledge construction are rapidly emerging and desperately needed. Explore contexts in which meaning emerges, illuminate this discovery process, and assist participants to become aware of the conscious and unconscious determinants that create the fabric of meaning. Employ an interdisciplinary approach that integrates such diverse topics as sensory perception, infant patterning, neural programming, limbic system resonance, family values, and the influence of place, religion, propaganda, fine art, social control, cultural influences, and unconscious biases to explore this ecology of learning. Learn to “step out” of your everyday habitual patterns of interpreting life’s events and learn methods of consciously participating in the process of creating meaning.

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allowed; prereq dept consent; 
Instructor: Manning, Christie
Description: Student may contact the instructor or department for information.

LS 5100 Liberal Studies Seminar: Communicating Sustainability: Dilemma of Challenges
A-F only, 2 credit(s), max credits 24, 24 completions allowed; prereq dept consent; 
Instructor: Schuelke, L. David
Description: Student may contact the instructor or department for information.

LS 5950 Special Topics: I, Robot: Human Identity in the Biotech Age
A-F only, 1 credit(s), max credits 12, 3 completions allowed; prereq dept consent; 
Instructor: LeFevre, Camille Lynn
Description: Student may contact the instructor or department for information.

LS 5950 Special Topics: Feminists Go to the Movies
A-F only, 1 credit(s), max credits 12, 3 completions allowed; prereq dept consent; 
Instructor: Desai, Jigna
Description: Student may contact the instructor or department for information.

LS 8001 Introduction to Interdisciplinary Inquiry
A-F only, 3 credit(s); prereq MLS student, dept consent; 
Instructor: Gustafson, Donna Mae J
Description: 

LS 8002 Final Project for Graduate Liberal Studies
A-F only, 3 credit(s); prereq MLS; all MLS coursework must be completed by end of sem, dept consent; 
Instructor: Look, Peter William
Description: Students synthesize/complete final project.

LING 1701 Language and Society
4 credit(s); 
Instructor: STAFF
Description: This course is an introduction to the scientific study of human language. The course offers basic technical skills and foundational concepts required for language analysis, as well as an enhanced awareness of the goals, problems and promise of linguistic inquiry. Emphasis will be on the structure of human language. General questions include: what are the basic properties of human language? How do languages differ and how are they all alike? To what extent is human language part of the biological endowment of all humans and to what extent must it be learned? We will examine data from a variety of languages at the level of sound, sentence structure, meaning and use, exploring variation and similarity both across and within languages. Specific topics include: phonetics and phonology (how do we describe and analyze the sounds and sound patterns of human languages?), morphology and syntax (what are the structures of words and sentences?), semantics and pragmatics (how do we interpret language?) We will also discuss topics in historical-comparative linguistics (how do languages change over time, how are they related to one another and what methods are used in determining such relationships?), language acquisition (how are languages learned, by children as a first language and by children and adults as a second language?), and the relation between language and culture.
Grading: 25% mid exam, 25% final exam, 15% reports/papers, 35% written homework.
Exam Format: Two supervised, in-person (not online) exams.

LING 3001 Introduction to Linguistics
4 credit(s); Credit will not be granted if credit has been received for: LING 3001H; Meets CLE req of Social Sciences; 
Instructor: STAFF
Description: This course is a general introduction to the various subfields of linguistics, the discipline devoted to the nature of human language, its basic in cognition, and its role in human affairs. The main emphasis in the course will be on the structural components of language: syntax (phrase and sentence structure), morphology (word structure), phonology (sound structure), and semantics/pragmatics (meaning). Students will learn about how human languages can differ from one another and how they are alike; they will also learn basic techniques for describing and analyzing linguistic data through working on examples taken from various languages of the world. An understanding of structural components of language will also serve as the basis for an introduction to subfields of linguistics concerned with how languages change over time (historical linguistics), the nature and cause of regional and social variation and diversity within a given language (sociolinguistics), how languages are learned by children and by adults learning a second language (language acquisition), and the biological basis of language in the brain (neurolinguistics). The course will be conducted through lectures and discussions. Course requirements include regular assignments, a midterm and a final. Target audience is anyone with an interest in the nature of human language.
Style: 80% Lecture, 20% Discussion. 
Grading: 30% mid exam, 35% final exam, 35% problem solving.
Exam Format: Short answer
LING 3101W Languages of the World
3 credit(s); prereq 3001 or 3001H or 5001 or instr consent
Meets CLE req of Writing Intensive;
Instructor: STAFF
Description: In this course we will survey several methods used in the classification of languages, examining genetic and typological classifications in greater depth. We will explore what each reveals about the relationships and range of variation found in the world’s languages. The second half of the semester will survey representative languages and language families throughout the world, examining sample languages in greater depth for where they fit into the classification systems examined earlier. In each region studied, specific linguistic phenomena which are particularly well-developed in that region will be examined and compared, as appropriate, to related structures in languages known to class members. Students will investigate a language of their choice in some depth and present their findings in a final course project.
Style: 70% Lecture, 30% Discussion.
Grading: 20% final exam, 30% reports/papers, 20% quizzes, 10% class participation, 20% problem solving.
Exam Format: multiple choice, fill-in, matching, short answer

LING 4002 Linguistic Analysis
3 credit(s); prereq 3001 or 3001H or 5001 or instr consent
Instructor: Kac, Michael B
Description: This is a postintroductory course in problem-solving techniques for morphology, syntax and phonology. The problems are drawn from a variety of languages and language families; the emphasis is on identifying and describing significant generalizations in the linguistic data rather than on theoretical issues.
Style: 70% Lecture. Small-group problem-solving work in class.
Grading: 33% final exam, 66% other evaluation, assignments
Exam Format: problems comparable to the ones given on assignments

LING 4993 Directed Study
1-3 credit(s), max credits 10, 10 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Reese, Brian Jon
Description: Student may contact the instructor or department for information.

LING 5001 Introduction to Linguistics
4 credit(s); prereq grad or instr consent; Credit will not be granted if credit has been received for: LING 3001;
Instructor: Marcotte, Jean-Philippe
Description: Student may contact the instructor or department for information.

LING 5206 Linguistic Pragmatics
3 credit(s); prereq [4201 or 5201] or instr consent;
Instructor: Reese, Brian Jon
Description: Student may contact the instructor or department for information.

LING 5303 Phonology II
3 credit(s); prereq [4302W or 5302] or instr consent;
Instructor: Lubowicz, Anna
Description: Student may contact the instructor or department for information.

LING 5461 Conversation Analysis
3 credit(s); prereq 3001 or 3001H or 5001 or instr consent;
Credit will not be granted if credit has been received for: COMM 5461;
Instructor: Szatrowski, Polly Ellen
Description: In this course we will investigate language in its "natural habitat," everyday talk, and attempt to explain how language shapes and is shaped by social interaction. We will discuss basic features of conversational structure, such as turn-taking, adjacency pairs, overall organization, preference organization, pre-sequences and repair. Then we will analyze how participants use linguistic devices, such as syntactic projection, pause, back-channel utterances ('Uh huh'), laughter, etc., to make invitations, requests, present their opinions, tell stories, create humor, etc. We will also consider the role of interruption, overlap, repetition, preference, co-construction, byplay, and participant status in the interaction. If time permits we will analyze how nonverbal behavior (body and hand movements, head nods, gaze, etc.) contributes to the development of the conversation. We will analyze conversations in a variety of languages, including English, Japanese, French, and German. MAIN TEXTS: Coursepack including 1. Levinson, Steven C. 1983. 6 Conversational structure. Pragmatics. 284-370. Cambridge: Cambridge University Press. 2. Schegloff, Emanuel A. 1995. Talk in interaction: An introduction to conversation analysis. (manuscript) and other research papers PREREQUISITE: LING 3001 or 3011 or 5001 OR permission of the instructor.
Style: 40% Lecture, 30% Discussion. student presentations.
Grading: 35% class participation, 40% other evaluation. Major paper, abstract, presentation; 30% Written homework and data collection

LING 5993 Directed Study
1-3 credit(s), max credits 10, 10 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Reese, Brian Jon
Description: Student may contact the instructor or department for information.

LING 5993 Directed Study
1-3 credit(s), max credits 10, 10 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Szatrowski, Polly Ellen
Description: Student may contact the instructor or department for information.

LING 5993 Directed Study
1-3 credit(s), max credits 10, 10 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: Gundel, Jeanette K
Description: Student may contact the instructor or department for information.

LING 5993 Directed Study
1-3 credit(s), max credits 10, 10 completions allowed; prereq instr consent, dept consent, college consent;
MGMT 3001 Fundamentals of Management
A-F only, 3 credit(s);
Instructor: Kaiser, David
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policies, including fee and financial aid information. This course is designed for students who intend to work in a business environment. You will begin by learning the basic concepts and terminology of management. As you progress through the course materials, you will begin to understand the components of a manager's job as he or she analyzes and chooses options to benefit the organization. By the time you complete this course, you will begin to understand how the components of a manager's job come together in effective leadership and communication to manage people.
Style: 100% Web Based.
Grading: 14% mid exam, 28% final exam, 8% quizzes. -9 group discussions (18%) -1 individual writing assignment (17%) -1 group project (15%)
Exam Format: Online exams

MGMT 3010 Introduction to Entrepreneurship
A-F only, 4 credit(s);
Instructor: STAFF
Description: This course provides an overview to students regarding the role of entrepreneurship in our economy and to the process of new venture creation. The course is intended to broadly introduce the set of skills known to have an impact on entrepreneurial success. The students are introduced to various forms of entrepreneurial pursuits including independent start-ups, venturing within established organizations, franchising, and acquiring existing businesses. The course is delivered through formal lecture, guest speakers, group work and a variety of experiential exercises. Key learning objectives: (1) Provide exposure to the role of entrepreneurs in society and potential career paths, (2) Develop individual self-assessment of entrepreneurial interests and capabilities, (3) Examine the new venture creation process and key challenges of launching and growing new businesses, (4) Understand what skills are needed to become an entrepreneur, and (5) Begin to develop the foundational skills required to successfully embark on an entrepreneurial career, such as problem-solving under uncertainty, decision-making with incomplete information, opportunity identification, communication, innovation processes, sales, negotiations, recruitment and staffing, and leadership.

MGMT 3033V Honors: Business Communication
A-F only, 3 credit(s); prereq Jr or sr credit; honors student credit will not be granted if credit already received for: BA 3033W or 3033V; Meets CLE req of Writing Intensive;
Instructor: Littlefield, Holly A
Description: This section of Mgmt 3033 Business Communication will focus on important business communication concepts like audience analysis, persuasion, correspondence, discussion, presentations, and visual aids. The course will begin by covering these basics. Then you will apply these basics while working in small teams to complete a project for a local non-profit, small community business, or service organization. You will have some choice as to what project you would like to select. You will meet a few times with representatives from that organization, but this is not traditional volunteering. Instead you will be completing a project for the organization the way that an outside consulting team might. Some examples of projects might include creating a marketing plan for the organization, designing a website, surveying clientele to provide customer service recommendations, creating a database, writing brochures, flyers, or other literature, developing a plan to recruit volunteers or new employees. Benefits of taking this section include working with non-profits and small businesses, doing real-life projects, creating documents and projects that will actually be used and can be shown to perspective employers, taking part in community activities, working with diverse groups of people, and becoming aware of community issues and concerns. There is one, outside of class, required lab session for this course.
Style: 20% Lecture, 80% Discussion.
Grading: 10% mid exam, 15% reports/papers, 50% special projects, 15% in-class presentation, 10% class participation.
Exam Format: essay

MGMT 3033W Business Communication
A-F only, 3 credit(s); prereq Fr composition, CSOM upper-div, at least 60 cr credit will not be granted if credit already received for: BA 3033W or 3033V; Meets CLE req of Writing Intensive;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

MGMT 3033W Business Communication
A-F only, 3 credit(s); prereq Fr composition, CSOM upper-div, at least 60 cr credit will not be granted if credit already received for: BA 3033W or 3033V; Meets CLE req of Writing Intensive;
Instructor: Littlefield, Holly A
Description: Mgmt 3033- Business Communications fosters students' communication and analytical skills. It helps students become credible professionals who can effectively contribute to organizations and communities and successfully employ a variety of communications strategies and skills. The course combines writing and speaking into a single, semester-long course required of all Carlson School undergraduates. It gives students opportunities to develop critical thinking and applied communications skills using a variety of real world speaking and writing assignments. Students give multiple presentations both individually and in teams, they take part in a case study competition; and they also create a variety of business documents including emails, memos, reports, letters, and PowerPoint decks. This course should help students to: --Communicate credibly and deliver written and spoken messages that are adapted to the specific needs of the audience and situation; --Understand differences in message design; --Employ the persuasive most effective in writing and speaking situations; --Understand the persuasive effect of
presenting quantitative information and appealing to audience logic or emotions; --Demonstrate effective nonverbal communication skills; --Critically judge information and information sources; --Build sound arguments, using data and logic, when delivering a persuasive message; --Use technology to increase the effectiveness of communication. There is one, outside of class, required lab session for this course.

Style: 20% Lecture, 80% Discussion.
Grading: 10% mid exam, 40% reports/papers, 5% quizzes, 30% in-class presentation, 15% class participation.

MGMT 3033W Business Communication
A-F only, 3 credit(s); prereq FR composition, CSOM upper-div, at least 60 cr credit will not be granted if credit already received for: BA 3033W or 3033V; Meets CLE req of Writing Intensive;
Instructor: Syverson MA, JoAnn
Description: BA 3033--Business Communications fosters and enhances students' cognitive abilities and communication skills. It helps students become credible professionals who can effectively contribute to organizations and communities and successfully employ a variety of communications strategies and skills. BA 3033, Business Communications combines writing and speaking into a single, semester-long course required of all Carlson School undergraduates. This course gives students opportunities to develop critical thinking and applied skills through both speaking and writing assignments that simulate real business communication. Students take part in writing, speaking, discussions, team-work and other communications activities. This course should help students to: Communicate credibly and deliver both written and spoken messages that are adapted to the specific needs of the audience and situation; Understand differences in message design and audience interpretation of the various forms of business communication; Realize the persuasive strategies most effective in writing and speaking situations; Understand the persuasive effect of presenting quantitative information and appealing to audience logic or emotions; Demonstrate effective nonverbal communication skills; Critically judge information and information sources; Build sound arguments, using data and logic, when delivering a persuasive message; Use technology to increase the effectiveness of communication.
Style: 20% Lecture, 80% Discussion.
Grading: 10% mid exam, 40% reports/papers, 40% in-class presentation, 10% class participation.

MGMT 3603 Topics: Environmental Issues
A-F only, 3 credit(s); prereq [MATH 1142 or [MATH 1271, MATH 1272]]; [APEC 1101 or ECON 1101 or 3261W]; Credit will not be granted if credit has been received for: ESPM 3603;
Instructor: Hill, Jason David
Description: Student may contact the instructor or department for information.

MGMT 3604 Topics: Environmental Issues
A-F only, 3 credit(s);
Instructor: Smith, Tim
Description: Student may contact the instructor or department for information.

MGMT 8302 Seminar in Organizations Theory
4 credit(s); prereq Business admin PhD student or instr consent;
Instructor: Van de Ven, Andrew Henry
Description: Student may contact the instructor or department for information.

MGMT 8401 Seminar in Strategy Content
4 credit(s); prereq Business admin PhD student or instr consent;
Instructor: Shaver, Myles
Description: Student may contact the instructor or department for information.
MT 3001 Manufacturing in a Global Economy
A-F only, 3 credit(s);
Instructor: King, William Tyler
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policy, fee, and financial aid information. In today's changing global economy, high-performing manufacturing operations must function at the intersection of three important dimensions: Leadership, Product Quality, and Innovation. This course breaks down each dimension in detail and explains how all three are interrelated and necessary to achieve sustainable profitability.
Style: 100% Web Based.
Grading: -1 group charter (2%) -3 group exercises (14%) -15 discussion activities (7%) -6 individual papers (29%) -1 final paper (48%)

MT 4001 Manufacturing Cost Accounting, Analysis, and Control
A-F only, 3 credit(s); prereq Financial accounting, 45 cr;
Instructor: Vickman, Thomas M
Description: This fully online course is offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policies, including fee and financial aid information. Why should I register for this course? You will look at your career from a new perspective, and increase your contribution to the bottom line, whatever your role. Accounting is the language of business, and finance is not very far behind. Learn to talk the talk and make effective financial contributions. You will learn a variety of basic scenarios using accounting and finance models and the knowledge and tools for applying them to a particular business sector: retail, manufacturing, government, hospitality, non-profit, medical, construction. Some examples: An IT department head in a medium size business prepares department budgets and justifies capital expenditures. A language specialist in the U.S. home office of an international company justifies program budgets and ongoing expenditures. A consulting psychologist must know how the numbers come together and what they mean. How much should we bill an hour? What is the minimum number of hours we must bill to break even? How do we project our cash needs? You will learn how to *distinguish between various management cost terms and concepts. *identify and understand quality costs and quality programs. analyze costing activities to help improve an organization's work flow. *understand how fixed and variable costs behave. *calculate the effects on profitability of changes in selling prices, costs, sales mix, and volume. *prepare various types of budgets. *calculate standard cost variances and determine what they mean. *apply decision techniques to determine whether to retain or discontinue a product; make, lease, or buy a part; accept or refuse an order; and expand, shut down, or eliminate a facility or product line. *apply the concept of the time value of money to determine present and future value.
Course Requirements 1 self-introduction 9 discussions 1 test submission 10 quantitative problem sets 2 quizzes 3 unit projects
Style: 100% Web Based.
Grading: 30% special projects, 10% quizzes. -self-introduction and test submission (2%) -9 online discussions (18%) -10 problem sets (40%)

MT 4035 Global Supply Chain Technology
A-F only, 3 credit(s); prereq ABUS 4102 or professional experience;
Instructor: Martens, Scott L
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Processes and technology to manage operations and quality accurately and real-time in a global business environment. Supplier selection, costs of procurement, risk, time management, outsourcing. Current issues and trends.
Style: Online
Grading: 20% mid exam, 20% final exam, 10% special projects. -12 article questions (10%) -12 module questions (10%) -group participation, based on Peer Evaluation Forms (10%) -self-introduction (required but not graded) -interview report (20%)

MT 4201 Quality Engineering and Process Improvement
A-F only, 3 credit(s); prereq Statistics, 45 cr;
Instructor: Begicz, Michael Daniel
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. Principles and historical foundations of total quality. Best practices of high-performing quality organizations. Role of leadership and strategic planning. How to implement continuous improvement in manufacturing processes. Baldridge criteria, ISO 9000 standards, Lean Six Sigma.
Style: 100% Web Based.
Grading: 15% final exam. -12 online group exercises (23%) -final group project (20%) -self-introduction (2%) -10 individual responses to group exercises (10%) -14 textbook questions exercises (30%)

Marketing
3-150 Carlson School of Management

MKTG 3001 Principles of Marketing
A-F only, 3 credit(s); prereq ECON 1101;
Instructor: Mackenzie, Lydia May
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid information. After taking this course, you'll never look at marketing--whether in the form of advertising, retailing, or personal selling--in quite the same way. You will be introduced to terms, concepts, and skills needed for analyzing marketing problems. The course will help you explore those factors in an outside organization that affect its product, pricing, promotion, and distribution decisions. We will analyze, describe, and discuss cases from actual organizations. At the conclusion of this course, you should be able to: --apply key marketing terms and concepts; --understand and apply the marketing process; --describe how marketing affects our lives; --develop basic analytical skills used in making marketing-related decisions; --discuss marketing strategy alternatives; and --integrate all marketing elements into a written proposal for a marketing plan.
Style: Online with handwritten exams
Grading: 20% mid exam, 20% final exam, 35% written homework. Marketing plan--23% Course completion calendar--2%
Exam Format: Supervised, in-person (not online) exams

Master of Business Administration
2-210 Carlson School of Management

MBA 6030 Financial Accounting
A-F only, 3 credit(s); prereq Evening MBA Student;
Instructor: Zhang, Ivy Xiying
Description: Student may contact the instructor or department for information.

MBA 6030 Financial Accounting
A-F only, 3 credit(s); prereq Evening MBA Student;
Instructor: Dey, Ayeesha
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
University of Minnesota - Course Guide for Twin Cities Campus  Fall 2011

MBA 6035 Managerial Accounting
A-F only, 3 credit(s); prereq 6030, 6230, MBA student;
Instructor: Duke,Gordon Leon
Description: Student may contact the instructor or department for information.

MBA 6140 Managerial Economics
A-F only, 2 credit(s); prereq MBA student;
Instructor: Waldfogel,Joel
Description: Student may contact the instructor or department for information.

MBA 6230 Financial Management
A-F only, 3 credit(s); prereq 6030, MBA student;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

MBA 6300 Strategic Management
A-F only, 3 credit(s); prereq MBA student;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

MBA 6501 Carlson Funds Enterprise: Growth
2-4 credit(s), max credits 12, 3 completions allowed; prereq MBA student or [applied to or accepted in] spring of 1st yr; [6031, ACCT 6100, ACCT 6160, MBA student, emphasis in finance mgmt] recommended;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

MBA 6502 Carlson Funds Enterprise: Fixed Income
2-4 credit(s), max credits 12, 3 completions allowed; prereq [Applied to or accepted in] spring-B; [6031, ACCT 6100, ACCT 6160, MBA student, emphasis in finance mgmt] recommended;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

MBT 5200 Tax Accounting Methods and Periods
A-F only, 4 credit(s); prereq ACCT 5135, MBT student;
Instructor: STAFF
Description: This course covers rules affecting timing of income and deductions for tax purposes. Topics include cash and accrual accounting methods overall and with respect to individual items of income and deductions, and rules for changing accounting methods and changing accounting periods.

Master of Business Taxation
3-108 Carlson School of Management

Master of Development Practice

MDP 5001 Ways of Knowing and Sustainable Livelihoods
A-F only, 2 credit(s); prereq Grad MDP major or instr consent;
Instructor: Sheppard,Eric
Description: Student may contact the instructor or department for information.

Materials Science
151 Amundson Hall

MATS 1001 Advances in Chemical Engineering and Materials

MATS 1001 Introduction to the Science of Engineering Materials
A-F only, 3 credit(s); prereq CHEM 1021, MATH 1272, PHYS 1301W, CSE student;
Instructor: Schott,Jeffrey H.
Description: Student may contact the instructor or department for information.

MATS 2001 Introduction to the Science of Engineering Materials Laboratory
A-F only, 1 credit(s); prereq [2001 or Concurrent registration is required (or allowed) in 2001], IT student;
Instructor: Schott,Jeffrey H.
Description: Student may contact the instructor or department for information.

MATS 3011 Introduction to Materials Science and Engineering
3 credit(s); prereq CHEM 1021, [MATH 1272 or MATH 1372], PHYS 1302, CSE student;
Instructor: Mkhoyan,Andre
Description: Student may contact the instructor or department for information.

MATS 3012 Metals and Alloys
A-F only, 3 credit(s); prereq [3011, [MatS or ChEn upper div]] or instr consent;
Instructor: Shores,David A
Description: Student may contact the instructor or department for information.

MATS 3041 Industrial Assignment I
A-F only, 2 credit(s); prereq MatS upper div, completion of required courses in MatS program through fall sem of 3rd yr, GPA of at least 2.80, regis in co-op program; Credit will not be granted if credit has been received for: CHEN 3041;
Instructor: STAFF
Description: MatS 3041. Industrial Assignment I. (2 cr, MatS upper div, regis in MatS co-op program, completion of required courses in MatS program through Fall semester/3rd yr) First industrial work assignment in engineering co-op program. Evaluation based on formal written report describing the semester's work assignment. Style: On-the-job training Grading: 100% reports/papers.

MATS 3081 Structural Characterization Lab
A-F only, 3 credit(s); prereq [3011, MatS upper div] or dept consent;
Instructor: Leighton,Chris
Description: Student may contact the instructor or department for information.

MATS 4001 Thermodynamics of Materials
A-F only, 4 credit(s); prereq MatS upper div;
Instructor: Wentzcovitch,Renata M
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
MATS 4013 Electrical and Magnetic Properties of Materials
A-F only, 3 credit(s); prereq [3011, [CHEM 3502 or PHYS 2903], upper div [MatS or ChEn]] or instr consent;
Instructor: Holmes,Russell
Description: Student may contact the instructor or department for information.

MATS 4041 Industrial Assignment II
A-F only, 2 credit(s); prereq 3041, completion of required courses in MatS program through fall sem of 4th yr, GPA of at least 2.80; registration in co-op program; Credit will not be granted if credit has been received for: CHEN 4041;
Instructor: STAFF
Description: MatS 4041. Industrial Assignment II (2 cr., regis in MatS co-op program, completion of required courses in MatS program through Fall semester/yr 4) Second industrial work assignment in MatS co-op program. Application of Materials Science principles to the solution of engineering design problems in an industrial work environment. Evaluation based on formal written report emphasizing design issues derived from work assignment.
Style: On-the-job training
Grading: 100% reports/papers.

MATS 4212 Ceramics
A-F only, 3 credit(s); prereq [3011, [4001 or CHEN 3101], [MatS or ChEn upper div]] or instr consent ;
Instructor: Francis,Lorraine F
Description: The first part of the course will cover materials fundamentals (structure, bonding, phase equilibria, interfaces, defects, microstructure) as they apply to crystalline and non-crystalline ceramics. The second part will be devoted to the properties of ceramics: thermal, mechanical, electrical and optical. Special topics such as composites and thin films will also be included. There will be several "mini-labs" which will coincide with some major topics in the course. These mini-labs will involve demonstrations and hands-on experiments in the Materials Science & Engineering teaching labs (rm B30). Mini-labs will take place during class time.
Style: 80% Lecture, 10% Discussion. Demonstrations/hands-on
Grading: 40% mid exam, 25% final exam, 10% reports/papers, 25% problem solving.
Exam Format: Problems; short answer

MATS 4221 Materials Design and Performance
A-F only, 4 credit(s); prereq MatS 3012 or instr consent ;
Instructor: Gerberich,William W
Description: Student may contact the instructor or department for information.

MATS 4401 Senior Design Thesis I
A-F only, 2 credit(s); prereq := 4400; MatS senior, dept consent , GPA of at least 3.00, project approval by faculty adviser;
Instructor: Leighton,Chris
Description: Student may contact the instructor or department for information.

MATS 4511W Corrosion and Electrochemistry of Corrosion
A-F only, 4 credit(s); prereq MatS 3011 or instr consent , upper div CSE or grad; Meets CLE req of Writing Intensive;
Instructor: Shores,David A
Description: Student may contact the instructor or department for information.

MATS 4512 Corrosion and Electrochemistry of Corrosion
4 credit(s); prereq MatS 3011 or instr consent , upper div CSE or grad;
Instructor: Shores,David A
Description: Student may contact the instructor or department for information.

MATS 4512 Corrosion and Electrochemistry of Corrosion
4 credit(s); prereq MatS 3011 or instr consent , upper div CSE or grad;
Instructor: Shores,David A
Description: Student may contact the instructor or department for information.

MATS 4512 Corrosion and Electrochemistry of Corrosion
4 credit(s); prereq MatS 3011 or instr consent , upper div CSE or grad;
Instructor: Shores,David A
Description: Student may contact the instructor or department for information.

MATS 4591 Independent Study in Materials Science
OPT No Aud, 1-3 credit(s), max credits 6, 3 completions allowed; prereq Upper div mat sci;
Instructor: STAFF
Description: Library, theoretical, laboratory, or design studies of scientific or engineering topics in materials science for an individual student. Course content and credits by arrangement with faculty supervisor. Design credits available if arranged with supervisor. May be used for Upper Division Honors Program experience if arranged with advisor and Honors advisor.

MATS 4593 Directed Study in Materials Science
A-F only, 1-4 credit(s), max credits 6, 3 completions allowed; prereq upper div MatS;
Instructor: STAFF
Description: Directed study under faculty supervision. Student should meet with faculty supervisor before registering to arrange study project, grading option, credits, and final report requirements.

MATS 5353 Electron Microprobe Theory and Practice
3 credit(s); prereq [One yr chem, one yr physics] or instr consent ; Credit will not be granted if credit has been received for: GEO 5353;
Instructor: Frahm,Ellery Edward
Description: Student may contact the instructor or department for information.

MATS 8001 Structure and Symmetry of Materials
3 credit(s); prereq MatS and ChEn majors must take this course for a grade;
Instructor: Frisbie,Ç Daniel
Description: Student may contact the instructor or department for information.

MATS 8002 Thermodynamics and Kinetics
A-F only, 3 credit(s);
Instructor: Aydil,Eray S
Description: Student may contact the instructor or department for information.

MATS 8221 Synthetic Polymer Chemistry
A-F only, 4 credit(s); prereq [Undergrad organic chemistry course, undergrad physical chemistry course] or instr consent ; Credit will not be granted if credit has been received for: CHEM 4221;
Instructor: Hillmyer,Marc Andrew
Description: Student may contact the instructor or department for information.

MATS 8993 Directed Study
1-12 credit(s), max credits 12, 1 completion allowed; Instructor: Frisbie,Ç Daniel
Description: Student may contact the instructor or department for information.
MATH 1031 College Algebra and Probability
3 credit(s); prerequisite 3 yrs high school math or satisfactory score on placement exam or grade of at least C- in [PSTL 731 or PSTL 732] Credit will not be granted if credit has been received for: 1051, 1151, 1155; Credit will not be granted if credit has been received for: MATH 1051; Meets CLE req of Mathematical Thinking;
Instructor: STAFF
Description: Overview: Linear and quadratic equations and inequalities; graphs of equations, including lines, circles, parabolas, composition, inverses of functions; transformations of graphs; linear, quadratic models; polynomials; exponentials; logarithms; counting; probability. Audience: Business majors wanting to take Math 1142 and elementary education majors wanting to take Math 3113. Also works as prerequisite for Math 1151. Satisfies the CLE Mathematical Thinking requirement.

MATH 1031 College Algebra and Probability
3 credit(s); prerequisite 3 yrs high school math or satisfactory score on placement exam or grade of at least C- in [PSTL 731 or PSTL 732] Credit will not be granted if credit has been received for: 1051, 1151, 1155; Credit will not be granted if credit has been received for: MATH 1051; Meets CLE req of Mathematical Thinking;
Instructor: Kinney, Donald Patrick
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policies, including fee and financial aid restrictions. Math 1031 is a course in algebra and analytic geometry beyond the usual coverage found in a three-year high school mathematics program. This course is equivalent to Math 1051, Precalculus I (3 credits). This course covers topics on solving equations and inequalities, and explores straight lines and functions in general. The functions discussed include exponential and logarithmic functions. You will learn to analyze certain functions and draw their graphs. The course will also teach you how to solve systems of equations and the use of certain sequences of numbers. You will also learn counting techniques and basic probability concepts.
Style: Online with hand-written exams
Grading: 40% mid exam, 40% final exam, 20% written homework.
Exam Format: Supervised, in-person exams

MATH 1038 College Algebra and Probability Submodule A-F only, 1 credit(s); prerequisite 1051 or 1151 or 1155;
Instructor: STAFF
Description: Intended for students who have already had the equivalent of Math 1051 and need the Probability and Counting component of Math 1031. Students take the first part of Math 1031, and their grade is based on their performance up to the first midterm exam. Contact the department to get a permission number into this class. Students will register to Math 1038 but attend a section of Math 1031. Students should choose a section of Math 1031 they wish to attend before contacting the department.

MATH 1051 Precalculus I
3 credit(s); prerequisite 3 yrs high school math or satisfactory score on placement test or grade of at least C- in [PSTL 731 or PSTL 732] Credit will not be granted if credit has been received for: 1051, 1151, 1155; Credit will not be granted if credit has been received for: MATH 1051; Meets CLE req of Mathematical Thinking;
Instructor: Kinney, Donald Patrick
Description: This course assumes that students have a good working knowledge of high school algebra, at least through Algebra II. The course begins with a very brief review of high school algebra. Students needing a more extensive review should register for PSTL 0731 or PSTL 0732 Intermediate Algebra. Topics include linear, quadratic, polynomial, and rational equations and inequalities; graphs of equations, including lines, circles, parabolas, polynomial, rational, exponential, and logarithmic functions; compositions and inverses of functions; transformations of graphs; linear and quadratic models; linear, absolute value, polynomial, rational, exponential, and logarithmic functions, with applications. This course is for students who wish to complete precalculus at a moderate pace; the Math 1051/Math 1151 combination is equivalent to Math 1155 Intensive Precalculus and satisfies the prerequisite for Math 1271 or Math 1371. Math 1051 and Math 1038 essentially equals Math 1031 and satisfies the CLE Mathematical Thinking requirement.
Style: 75% Lecture, 25% Discussion.
Grading: 45% mid exam, 35% final exam, 20% problem solving.
Exam Format: Solve problems such as “Graph f(x) = (x^3 - 1)/(x^2 - 9) .

MATH 1051 Precalculus I
3 credit(s); prerequisite 3 yrs high school math or satisfactory score on placement test or grade of at least C- in [PSTL 731 or PSTL 732] Credit will not be granted if credit has been received for: 1031, 1151, 1155; Credit will not be granted if credit has been received for: MATH 1051; Meets CLE req of Mathematical Thinking;
Instructor: STAFF
Description: This course assumes that students have a good working knowledge of high school algebra, at least through Algebra II. The course begins with a very brief review of high school algebra. Students needing a more extensive review should register for PSTL 0731 or PSTL 0732 Intermediate Algebra. Topics include linear, quadratic, polynomial, and rational equations and inequalities; graphs of equations, including lines, circles, parabolas, polynomial, rational, exponential, and logarithmic functions; compositions and inverses of functions; transformations of graphs; linear and quadratic models; linear, absolute value, polynomial, rational, exponential, and logarithmic functions, with applications. This course is for students who wish to complete precalculus at a moderate pace; the Math 1051/Math 1151 combination is equivalent to Math 1155 Intensive Precalculus and satisfies the prerequisite for Math 1271 or Math 1371. Math 1051 and Math 1038 essentially equals Math 1031 and satisfies the CLE Mathematical Thinking requirement.
Style: 75% Lecture, 25% Discussion.
Grading: 45% mid exam, 35% final exam, 20% problem solving.
Exam Format: Solve problems such as “Graph f(x) = (x^3 - 1)/(x^2 - 9) .

MATH 1142 Short Calculus
4 credit(s); prerequisite Satisfactory score on placement test or grade of at least C- in [PSTL 1031 or 1151]; Credit will not be granted if credit has been received for: MATH 1271; Meets CLE req of Mathematical Thinking;
Instructor: Devlin, Patrick Michael
Description: Student may contact the instructor or department for information.

MATH 1142 Short Calculus
4 credit(s); prerequisite Satisfactory score on placement test or grade of at least C- in [PSTL 1031 or 1151]; Credit will not be granted if credit has been received for: MATH 1271; Meets CLE req of Mathematical Thinking;
Instructor: STAFF
Description: Overview: A one-semester tour of differential and integral calculus in one variable, and differential calculus in two variables. Does not involve any trigonometry. Emphasis on formulas and their interpretation and use in applications. Audience: Business, architecture, and agricultural science majors, and students who want some exposure to calculus. Does not serve as a prerequisite to any higher math course, but does satisfy the CLE Mathematical Thinking requirement.
MATH 1151 Precalculus II
3 credit(s); prerequisite Satisfactory score on placement exam or grade of at least C- in [1031 or 1051]; credit will not be granted if credit received for Math 1155; Credit will not be granted if credit has been received for: MATH 1155; Meets CLE req of Mathematical Thinking;
Instructor: Kinney, Donald Patrick
Description: Overview: Trigonometric functions and inverse trigonometric functions: definitions, graphs, identities, applications; real and complex zeroes of polynomials; polar coordinates; DeMoivre's Theorem; conic sections; solutions of linear systems by substitution and elimination; systems of nonlinear equations and systems of inequalities; arithmetic sequences and geometric series. Audience: Students from Math 1051 or Math 1031 and those that need a little refresher course before going on to calculus, often because of the trig. Satisfies the prerequisite for Math 1271 or Math 1371 and also satisfies the CLE Mathematical Thinking requirement.

MATH 1151 Precalculus II
3 credit(s); prerequisite Satisfactory score on placement exam or grade of at least C- in [1031 or 1051]; credit will not be granted if credit received for: Math 1155; Credit will not be granted if credit has been received for: MATH 1155; Meets CLE req of Mathematical Thinking;
Instructor: Corbett, John
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. This course is designed for people who need only a brief introduction to calculus. Its purpose is to teach you the elements of differential and integral calculus, with an emphasis on business, economics, and the social sciences. This course requires proficiency in algebra. Knowledge of trigonometry is not needed. You will be introduced to the ideas of limits of functions at particular points and continuity of functions. These concepts lead to the definitions of derivative and differentiation. You will learn how to differentiate polynomial, rational, exponential, and logarithmic functions. After you master differentiation techniques, you will learn integration of certain functions.
Style: This is a printed correspondence section.
Grading: 40% midterm exam, 40% final exam, 20% written homework.
Exam Format: Supervised, in-person (not online) exams

MATH 1151 Precalculus II
3 credit(s); prerequisite Satisfactory score on placement exam or grade of at least C- in [1031 or 1051]; credit will not be granted if credit received for: Math 1155; Credit will not be granted if credit has been received for: MATH 1155; Meets CLE req of Mathematical Thinking;
Instructor: Hoq, Aminul
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. This course is designed for people who need only a brief introduction to calculus. Its purpose is to teach you the elements of differential and integral calculus, with an emphasis on business, economics, and the social sciences. This course requires proficiency in algebra. Knowledge of trigonometry is not needed. You will be introduced to the ideas of limits of functions at particular points and continuity of functions. These concepts lead to the definitions of derivative and differentiation. You will learn how to differentiate polynomial, rational, exponential, and logarithmic functions. After you master differentiation techniques, you will learn integration of certain functions.
Style: This is a printed correspondence section.
Grading: 40% midterm exam, 40% final exam, 20% written homework.
Exam Format: Supervised, in-person (not online) exams

MATH 1161 Statistics and Discrete Mathematics
A-F only, 3 credit(s); prerequisite Three yrs high school math or placement exam Only Rochester-admitted students will be able to enroll in this course.; Meets CLE req of Mathematical Thinking;
Instructor: Hoq, Aminul
Description: Student may contact the instructor or department for information.

MATH 1161 Statistics and Discrete Mathematics
A-F only, 3 credit(s); prerequisite Three yrs high school math or placement exam Only Rochester-admitted students will be able to enroll in this course.; Meets CLE req of Mathematical Thinking;
Instructor: Wei, Wei
Description: Student may contact the instructor or department for information.

MATH 1171 Calculus, Modeling, and Data I
A-F only, 3 credit(s); prerequisite Grade of at least C- in 1111 or placement exam or instructor consent; Meets CLE req of Mathematical Thinking;
Instructor: Huq, Aminul
Description: Student may contact the instructor or department for information.
MATH 2243 Linear Algebra and Differential Equations
4 credit(s); prereq [1272 or 1282 or 1372 or 1572] w/grade of at least C-; Credit will not be granted if credit has been received for: MATH 2373
Instructor: STAFF
Description: Overview: The course is divided into two somewhat related parts. Linear algebra: matrices and matrix operations, Gaussian elimination, matrix inverses, determinants, vector spaces and subspaces, dependence, Wronskian, dimension, eigenvalues, eigenvectors, diagonalization. ODE: Separable and first-order linear equations with applications. 2nd order linear equations with constant coefficients, method of undetermined coefficients, simple harmonic motion, 2x2 and 3x3 systems of linear ODE's with constant coefficients, solution by eigenvalue/eigenvectors, nonhomogenous linear systems; phase plane analysis of 2x2 nonlinear systems near equilibria. Audience: Part of the standard 2nd year calculus course for students outside of IT.

MATH 2243 Linear Algebra and Differential Equations
4 credit(s); prereq [1272 or 1282 or 1372 or 1572] w/grade of at least C-; Credit will not be granted if credit has been received for: MATH 2373
Instructor: Hewitt, Harlan A
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You will work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. In this course you will study the concepts of linear algebra and differential equations. You'll start by examining first-order differential equations and their applications. Then you will study linear algebra with some applications. The last major topic you will study is higher order equations and their application to physics. Before you begin studying the topics of this course, you'll probably find it helpful to review the calculus of one variable.
Style: This is a printed correspondence section.
Grading: 40% mid exam, 40% final exam, 20% written homework. If you take this course S/N, you must earn at least 70% to receive a grade of S.
Exam Format: Supervised, in-person (not online) exams

MATH 2263 Multivariable Calculus
4 credit(s); prereq [1272 or 1372 or 1572] w/grade of at least C-; Credit will not be granted if credit has been received for: MATH 2374
Instructor: STAFF
Description: Overview: Multivariable calculus: Curves in space, arc length and curvature, velocity and acceleration. Limits and continuity, partial differentiation, local extrema, exact differentials, chain rule, directional derivative and gradient, Lagrange multipliers, 2nd derivative test. Double integration, volume and other applications, polar coordinates, triple integration, cylindrical and spherical coordinates. Vector analysis: Vector fields, line integrals, path independence, Green's Theorem, surface integrals. Theorems of Gauss and Stokes. Audience: Part of the standard 2nd year calculus course for students outside of IT.

MATH 2263 Multivariable Calculus
4 credit(s); prereq [1272 or 1372 or 1572] w/grade of at least C-; Credit will not be granted if credit has been received for: MATH 2374
Instructor: Hewitt, Harlan A
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. In this course you will study the concepts of multivariable calculus, an extension of differential and integral calculus. You will start by examining partial derivatives and their application to maxima, minima, rate problems, and approximations. Then you will study double and triple integrals and their applications to volume and mass. The last major topic you will study is vector analysis and its application to the work done by a force, flux, and other physical quantities.
Style: This is a printed correspondence section.
Grading: 40% mid exam, 40% final exam, 20% written homework.
Exam Format: Supervised, in-person exams.

MATH 5711 Linear Programming and Combinatorial Optimization
4 credit(s); prereq 2 sems soph math [including 2243 or 2373 or 2573]; Instructor: Carlsson, John Gunnar
Description: Student may contact the instructor or department for information.

MATH 5900 Tutorial in Advanced Mathematics
A-F only, 1-6 credit(s), max credits 120, 20 completions allowed;
Instructor: Lerman, Gilad M
Description: Student may contact the instructor or department for information.

MATH 8001 Preparation for College Teaching
S-N only, 1-6 credit(s), max credits 3, 1 completion allowed; prereq Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress; math grad student in good standing or instr consent;
Instructor: Keynes, Harvey Bayard
Description: Student may contact the instructor or department for information.

MATH 8990 Topics in Mathematics
S-N only, 1-6 credit(s), max credits 24, 4 completions allowed; prereq instr consent;
Instructor: Lerman, Gilad M
Description: Student may contact the instructor or department for information.

MATH 8991 Independent Study
S-N only, 1-6 credit(s), max credits 24, 4 completions allowed; prereq instr consent;
Instructor: Voronov, Alexander A
Description: Student may contact the instructor or department for information.

Mathematics Education
145 Peik Hall

MTHE 3101 Mathematics and Pedagogy for Elementary Teachers I
A-F only, 3 credit(s); prereq [College algebra, elementary FOE student, jr status or above] or instr consent;
Instructor: Cramer, Kathleen Ann
Description: Math content knowledge of K-6 in an environment modeling pedagogy for future implementation. Integrated content/methods. Problem solving, connections, communication, reasoning, representation. Functions, proportionality, number, numeration.

MTHE 3101 Mathematics and Pedagogy for Elementary Teachers I
A-F only, 3 credit(s); prereq [College algebra, elementary FOE student, jr status or above] or instr consent;
Instructor: Monson, Debra Sue
Description: Math content knowledge of K-6 in an environment modeling pedagogy for future implementation. Integrated content/methods. Problem solving, connections, communication, reasoning, representation. Functions, proportionality, number, numeration.

MTHE 3101 Mathematics and Pedagogy for Elementary Teachers I
A-F only, 3 credit(s); prereq [College algebra, elementary FOE student, jr status or above] or instr consent;
Instructor: Monson, Debra Sue
Description: Math content knowledge of K-6 in an environment modeling pedagogy for future implementation. Integrated content/methods. Problem solving, connections, communication, reasoning, representation. Functions, proportionality, number, numeration.
ME 2011 Introduction to Engineering  
**A-F only, 4 credit(s); prereq CSE lower div;**  
*Instructor:* Durfee, William K  
*Description:* Visit the course web site for a complete description.  

ME 3041 Industrial Assignment I  
**A-F only, 2 credit(s); prereq ME upper div, enrolled in ME co-op program;**  
*Instructor:* Marple, Virgil A  
*Description:* (2 cr per sem; prereq upper div ME, regis in Me co-op program; complete co-op sequence 3041, 4042, 4043 for credit req) Industrial work assignment in mechanical engineering co-op program. Evaluation based on student's formal report covering the quarter's work assignment.  
*Style:* On the job training  
*Grading:* 100% reports/papers.  

ME 3221 Design and Manufacturing I: Engineering Materials and Manufacturing Processes  
**A-F only, 4 credit(s); prereq 2011, AEM 3031, MatS 2001, ME upper div;**  
*Instructor:* Yang, Rusen  
*Description:* Student may contact the instructor or department for information.  

ME 3221 Design and Manufacturing I: Engineering Materials and Manufacturing Processes  
**A-F only, 4 credit(s); prereq 2011, AEM 3031, MatS 2001, ME upper div;**  
*Instructor:* Yang, Rusen  
*Description:* Student may contact the instructor or department for information.  

ME 3222 Design and Manufacturing II  
**A-F only, 4 credit(s); prereq [3221 or Concurrent registration is required (or allowed) in 3221], [CSci 1113 or equiv], ME upper div;**  
*Instructor:* Kelso, Frank M  
*Description:* Student may contact the instructor or department for information.  

ME 3222 Design and Manufacturing II  
**A-F only, 4 credit(s); prereq [3221 or Concurrent registration is required (or allowed) in 3221], [CSci 1113 or equiv], ME upper div;**  
*Instructor:* Chase, Thomas Richard  
*Description:* Student may contact the instructor or department for information.  

ME 3281 System Dynamics and Control  
**A-F only, 4 credit(s); prereq AEM 2021, [Math 2243 or Math 2373], ME upper div;**  
*Instructor:* Dumitrica, Traian  
*Description:* Student may contact the instructor or department for information.  

ME 3324 Introduction to Thermal Science  
**A-F only, 3 credit(s); prereq Chem 1021, Math 2243, Phys 1301, [CSE student or COAFES pre-BAE major];**  
*Instructor:* Sparrow, Ephraim M  
ME 3331 Thermal Sciences I
A-F only, 3 credit(s); prereq Chem 1021, Phys 1301, CSE student;
Instructor: Kortshagen, Uwe Richard
Description: Student may contact the instructor or department for information.

ME 3332 Thermal Sciences II
A-F only, 3 credit(s); prereq Math 2243, 3331, ME upper div credit will not be granted if credit already received for: ME 3322;
Instructor: Hogan, Chris
Description: Student may contact the instructor or department for information.

ME 3333 Thermal Sciences III
A-F only, 3 credit(s); prereq 3332, ME upper div credit will not be granted if credit already received for: ME 3322;
Instructor: Bischof, John C
Description: Student may contact the instructor or department for information.

ME 4031W Basic Mechanical Measurements Laboratory
A-F only, 4 credit(s); prereq [3333 or Concurrent registration is required allowed in 3333], IE 4521, upper div ME;
Meets CLE req of Writing Intensive;
Instructor: McMurry, Peter H
Description: Student may contact the instructor or department for information.

ME 4043W Industrial Assignment II
A-F only, 4 credit(s); prereq 3041; Meets CLE req of Writing Intensive;
Instructor: Marple, Virgil A
Description: Student may contact the instructor or department for information.

ME 4044 Industrial Assignment III
A-F only, 2 credit(s); prereq ME upper div, registration in ME co-op program;
Instructor: Marple, Virgil A
Description: Student may contact the instructor or department for information.

ME 4054W Design Projects
A-F only, 4 credit(s); prereq 2011, 3221, 3222, 3281, 3321, 3322, 4031W, AEM 2021, AEM 3031, EE 3005; Meets CLE req of Writing Intensive;
Instructor: Mantell, Susan C
Description: Student may contact the instructor or department for information.

ME 4081H Mechanical Engineering Honors Thesis I
A-F only, 2 credit(s); prereq ME upper div honors student, instr consent;
Instructor: Chase, Thomas Richard
Description: Student may contact the instructor or department for information.

ME 4082H Mechanical Engineering Honors Thesis II
A-F only, 2 credit(s); prereq ME upper div honors student, instr consent; Meets CLE req of Writing Intensive;
Instructor: Strykowski, Paul John
Description: Student may contact the instructor or department for information.

ME 4090 Advanced Engineering Problems
1-4 credit(s), max credits 4, 1 completion allowed; prereq ME upper div, instr consent;
Instructor: Durfee, William K
Description: Student may contact the instructor or department for information.

ME 4231 Motion Control Laboratory
A-F only, 4 credit(s); prereq 3281, 4031W, ME upper div;
Instructor: Rajamani, Rajesh
Description: Student may contact the instructor or department for information.

ME 4232 Fluid Power Control Lab
A-F only, 4 credit(s); prereq 3281, 4031W, ME upper div;
Instructor: Li, Perry Y
Description: This course’s objectives are: 1) Introduce fluid power component, circuits, and systems; 2) Provide hands on experience in design, analysis and implementation of control systems for real and physical systems; 3) Provide first-hand experience in modeling, control and other dynamic systems concepts, such as in ME 3281. Students will design, build and study hydraulic circuits in the first half of the semester, and design, analyze and implement controllers of different sophistications for electrohydraulic systems in the second half. There will be extensive use of Matlab/Simulink in analysis, implementation and design. This course emphasizes laboratory experience and making connections between physical systems and mathematical models.
Style: 33% Lecture, 66% Laboratory.
Exam Format: There will be one oral final exam

ME 4331 Thermal Energy Engineering Laboratory
A-F only, 4 credit(s); prereq [3331, 3332, 3333, 4031W], [CSE upper div or grad student];
Instructor: Goldstein, Richard J
Description: Student may contact the instructor or department for information.

ME 4431W Energy Conversion Systems Laboratory
A-F only, 4 credit(s); prereq 3333, 4031W, [IT upper div or grad student]; Meets CLE req of Writing Intensive;
Instructor: Kittelson, David Burnell
Description: Student may contact the instructor or department for information.

ME 4431W Energy Conversion Systems Laboratory
A-F only, 4 credit(s); prereq 3333, 4031W, [IT upper div or grad student]; Meets CLE req of Writing Intensive;
Instructor: Kittelson, David Burnell
Description: Student may contact the instructor or department for information.

ME 5103 Thermal Environmental Engineering
A-F only, 4 credit(s); prereq 3331 or 3332, 3333, CSE upper div or grad;
Instructor: Kuehn, Thomas Howard
Description: The main objective of this course is to gain a better understanding of man-made environments, primarily buildings, and to use this knowledge to quantify energy use, human thermal comfort, and occupant health. Topics include psychrometrics, forced air heating and cooling systems, heat transfer through composite structures, ventilation, air cleaning, solar energy, and energy estimation methods. Applications include residences, commercial office buildings and specialized
environments such as clean rooms, hospital operating rooms, museums, and spacecraft. Designing and operating building systems to protect occupants from infectious airborne agents is also addressed.

Style: 80% Lecture, 20% Discussion.

Grading: 40% mid exam, 40% final exam, 20% problem solving.

Exam Format: problem solving

ME 5113 Aerosol/Particle Engineering
A-F only, 4 credit(s); prereq CSE upper div or grad student;
Instructor: Pu, David Y
Description: Student may contact the instructor or department for information.

ME 5211 Human Factors and Work Analysis
A-F only, 4 credit(s); Credit will not be granted if credit has been received for: IE 5511;
Instructor: Hayes, Caroline Clarke
Description: Student may contact the instructor or department for information.

ME 5228 Introduction to Finite Element Modeling, Analysis, and Design
A-F only, 4 credit(s); prereq CSE upper div or grad, 3221, AEM 3031, CSci 1113, MatS 2001;
Instructor: Tamama, Kumar K
Description: Student may contact the instructor or department for information.

ME 5241 Computer-Aided Engineering
A-F only, 4 credit(s); prereq CSE upper div or grad, 3222, CSci 1113 or equiv;
Instructor: Kelso, Frank M
Description: Student may contact the instructor or department for information.

ME 5281 Analog and Digital Control
4 credit(s); prereq 2281;
Instructor: Rajamani, Rajesh
Description: Student may contact the instructor or department for information.

ME 5312 Solar Thermal Technologies
A-F only, 4 credit(s); prereq [3333, CSE upper Div] or grad student;
Instructor: Davidson, Jane H
Description: Student may contact the instructor or department for information.

ME 5341 Case Studies in Thermal Engineering and Design
A-F only, 4 credit(s); prereq 3331, 3332, 3333, CSE upper div or grad student;
Instructor: Sparrow, Ephraim M
Description: This course may be the most useful among those offered in mechanical engineering. Real-world engineering problems are brought into the classroom. To solve problems of such real complexity, powerful technical tools are taught. These include ANSYS thermal (heat conduction), ANSYS structural and thermal stresses. The main part of the course is computational fluid dynamics (CFD). For this, CFX software is taught. These software codes are applied to numerous real-world problems. No prior experience with software is needed. No exams or quizzes. No textbook. Two projects. One-on-one computer lab help is available.

ME 5344 Thermodynamics of Fluid Flow With Applications
A-F only, 4 credit(s); prereq 3331, 3332, 3333, CSE upper div or grad student;
Instructor: Sparrow, Ephraim M
Description: Student may contact the instructor or department for information.

ME 5666 Modern Thermodynamics
A-F only, 4 credit(s); prereq 3331 or equiv;
Instructor: Hubel, Allison
Description: Student may contact the instructor or department for information.

ME 8254 Fundamentals of Microelectromechanical Systems (MEMS)
A-F only, 4 credit(s);
Instructor: Cui, Tianhong
Description: Student may contact the instructor or department for information.

ME 8285 Vehicle Dynamics and Control
A-F only, 3 credit(s); prereq 5281 or EE 5231 or equiv;
Instructor: Rajamani, Rajesh
Description: Student may contact the instructor or department for information.

ME 8341 Conduction
A-F only, 3 credit(s); prereq Undergrad class in heat transfer or instr consent;
Instructor: Kulacki, Francis A
Description: Student may contact the instructor or department for information.

ME 8343 Radiation
A-F only, 3 credit(s); prereq Undergrad class in heat transfer or instr consent;
Instructor: Lipinski, Wojciech
Style: 87% Lecture, 33% Discussion.
Grading: 25% mid exam, 25% final exam, 10% reports/papers, 15% quizzes, 25% written homework.

ME 8361 Molecular Gas Dynamics
A-F only, 3 credit(s); prereq CSE grad student; Credit will not be granted if credit has been received for: AEM 8231;
Instructor: Girshick, Steven L
Description: Student may contact the instructor or department for information.

ME 8462 Turbomachinery
A-F only, 3 credit(s); prereq CSE grad student, 3321, 3322 or equiv or instr consent;
Instructor: Simon, Terrence W
Description: Student may contact the instructor or department for information.

ME 8772 Advanced Transportation Technologies Seminar
S-N only, 1 credit(s); Credit will not be granted if credit has been received for: CE 8213;
Instructor: Donath, Max
Description:

ME 8773 Graduate Seminar
S-N only, 1 credit(s); prereq CSE grad student;
Instructor: Girshick, Steven L
Description: Student may contact the instructor or department for information.

ME 8774 Graduate Seminar
S-N only, 1 credit(s); prereq 8773;
Instructor: Girshick, Steven L
Description: Student may contact the instructor or department for information.

ME 8794 Mechanical Engineering Research
S-N only, 1-4 credit(s), max credits 4, 4 completions allowed;
Medical Industry Leadership Institute

4-145 Carlson School of Management

MILI 6562 Information Technology in Health Care
2 credit(s); prereq MBA student;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

MILI 6726 Medical Device Industry: Business and Public Policy
A-F only, 3 credit(s); prereq MBA student;
Instructor: Connor, Robert Alan
Description: Medical Device Industry: Business and Public Policy: This course covers the unique business, public policy, regulatory, and technology management issues of the medical device industry -- including growing interaction and overlap with the pharmaceutical, biotechnology, and information technology industries. The course features lecture and discussion with full time faculty, along with participation by industry leaders in guest faculty panels. Students successfully completing this course will understand: the historical development, importance, and future direction of the medical device industry; FDA issues, policies and strategies, public and private sector insurance coverage and reimbursement; interaction between public policies and private sector actions; intellectual property (IP) and liability issues concerning medical technology; and key issues relating to the start-up and management of new medical technology firms.

MILI 6955 Medical Industry Valuation Laboratory
A-F only, 2 credit(s), max credits 6, 3 completions allowed;
Instructor: STAFF
Description: Interdisciplinary student teams create rapid production market analysis of promising medical technologies/services to determine potential for success in market. Exposure to University innovations, venture firms, inventors.

MILI 6995 Independent Study
A-F only, 1-8 credit(s), max credits 16;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

Medical Chemistry
8-101 Weaver-Densford Hall

MEDC 5245 Introduction to Drug Design
A-F only, 3 credit(s); prereq Chem; Credit will not be granted if credit has been received for: PHAR 6245;
Instructor: Wagner, Carston R
Description: Concepts that govern design/discovery of drugs. Physical, bioorganic, medicinal chemical principles applied to explain rational design, mechanism of action drugs.

MEDC 5700 General Principles of Medicinal Chemistry
A-F only, 2 credit(s); prereq MedC grad student or instr consent;
Instructor: Xing, Chengguo
Description: Student may contact the instructor or department for information.

MEDC 8100 Medicinal Chemistry Seminar
1 credit(s), max credits 6, 6 completions allowed; prereq Grad major or instr consent;
Instructor: Abul-Hajj, Yusuf J
Description: Student may contact the instructor or department for information.

MEDC 8800 Medicinal Chemistry Laboratory Techniques
S-N only, 1-2 credit(s), max credits 4, 4 completions allowed; prereq Grad med chem major or instr consent;
Instructor: Fecik, Robert A
Description: Student may contact the instructor or department for information.

MEDC 8900 Research in Medicinal Chemistry
A-F only, 1-4 credit(s), max credits 8, 8 completions allowed; prereq Grad med chem major or instr consent;
Instructor: Fecik, Robert A
Description: Student may contact the instructor or department for information.

Medieval Studies
131 Nolte Center

MEST 3610 Topics in Medieval Studies
3-4 credit(s), max credits 24, 8 completions allowed;
Instructor: Bachrach, Bernard S
Description: Student may contact the instructor or department for information.

MEST 3610 Topics in Medieval Studies
3-4 credit(s), max credits 24, 8 completions allowed;
Instructor: Wakefield, Ray M
Description: This course, with lectures in English, offers an overview of the cultural, political, and social development of the German-speaking countries from the earliest days of contact between the Germanic tribes and the Romans until 1700. Emphasis will be placed on the way in which present-day Germany views its medieval and early modern past, and the role of the Middle Ages, the Reformation, and the Thirty Years War in the creation of a German national identity. Topics to be discussed include myths about the origins of the Germans, the Germanic reshaping of the ancient Roman world, the role of the German Empire in the development of medieval Christianity, the social position of women in medieval and early modern times, medieval and early modern court culture, Reformation and Counter-Reformation debates, Baroque culture in the German Empire. Discussions will involve many types of cultural artifacts, e.g., literary, historical, religious, philosophical texts; paintings, engravings, architecture; medieval and early modern music. Authors to be discussed include Tacitus, Einhard, Hildegard von Bingen, Luther, Grimmelshausen, et al. English discussion sections; question-and-answer sessions in German.

MEST 3610 Topics in Medieval Studies
3-4 credit(s), max credits 24, 8 completions allowed;
Instructor: Nicholson, Oliver
Description: Student may contact the instructor or department for information.

MEST 3610 Topics in Medieval Studies
3-4 credit(s), max credits 24, 8 completions allowed;
Instructor: Scheel, Andrew
Description: Student may contact the instructor or department for information.

MEST 3610 Topics in Medieval Studies
3-4 credit(s), max credits 24, 8 completions allowed;
Instructor: Vann Spricher, Tiffany D
Description: Student may contact the instructor or department for information.

MEST 5610 Advanced Topics in Medieval Studies

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
3-4 credit(s), max credits 15, 5 completions allowed; prereq One yr work in some area of Middle Ages, reading knowledge of appropriate language, instr consent ; Instructor: Firchow,Evelyn S Description: Student may contact the instructor or department for information.

MEST 5610 Advanced Topics in Medieval Studies 3-4 credit(s), max credits 15, 5 completions allowed; prereq One yr work in some area of Middle Ages, reading knowledge of appropriate language, instr consent ; Instructor: Reyerson,Kathryn L Description: Student may contact the instructor or department for information.

MEST 5610 Advanced Topics in Medieval Studies 3-4 credit(s), max credits 15, 5 completions allowed; prereq One yr work in some area of Middle Ages, reading knowledge of appropriate language, instr consent ; Instructor: Liberman,Anatoly Description: Old Saxon is a medieval Germanic language, known mainly from the /Heliand/ (The Savior), one of the greatest poetic monuments of old European literature. This life of Jesus, addressed, as it seems, to a recently converted audience and told by a poet of exceptional talent, is a rare window into the language, culture, and mentality of the past. The entire text cannot be covered in one semester, but we will read the most representative passages. As a rule, this course attracts a few graduate students who have had some previous exposure to Old Germanic, and five or six undergraduates to whom everything will be new. Our initial speed will be geared toward the second group (that is, in September and part of October we will be moving very slowly), but in five weeks or so the beginners will feel nearly as comfortable as the better prepared graduate students. The course presupposes neither tests nor papers. Its success and the grades will depend exclusively on attendance and performance in class. In addition to weekly assignments, short book reports are envisaged. Every student will be asked to read an article or a chapter in a book in English or Germ and tell its contents to the rest of the group.

MEST 5610 Advanced Topics in Medieval Studies 3-4 credit(s), max credits 15, 5 completions allowed; prereq One yr work in some area of Middle Ages, reading knowledge of appropriate language, instr consent ; Instructor: Scheil,Andrew Description: Student may contact the instructor or department for information.

Mycological Engineering 240 Gortner Lab

MICB 3301 Biology of Microorganisms A-F only, 5 credit(s); prereq [BIOL 1002 or BIOL 1009 or BIOL 2002], CHEM 2301, Concurrent registration is required (or allowed) in CHEM 2302; Credit will not be granted if credit has been received for: VBS 2032; Instructor: Mohr,Christian D Description: Microbiology 3303 will provide an extensive overview of the microbial world highlighting the structure, function, and diversity of microorganisms including bacteria, fungi, protozoa and viruses. Topics will include microbial taxonomy, anatomy, physiology, biochemistry, molecular biology and ecology. Microbial pathogenesis, immunology and infectious disease will also be presented and discussed.

MICB 3303 Biology of Microorganisms A-F only, 3 credit(s); prereq BIOL 2002, BIOL 2003, BIOL 2004, CHEM 1021, CHEM 1022, CHEM 2301, Concurrent registration is required (or allowed) in CHEM 2302; Credit will not be granted if credit has been received for: MICB 3301; Instructor: Mohr,Christian D Description: Microbiology 3303 will provide an extensive overview of the microbial world highlighting the structure, function, and diversity of microorganisms including bacteria, fungi, protozoa and viruses. Topics will include microbial taxonomy, anatomy, physiology, biochemistry, molecular biology and ecology. Microbial pathogenesis, immunology and infectious disease will also be presented and discussed.

MICB 4111 Microbial Physiology and Diversity 3 credit(s); prereq [2022 or VPB 2022 or BIOL 2032 or VPB 2032 or VBS 2032 or 3301 or Biol 3301], [BioC 3021 or Biol 3021 or BioC 4331]; Instructor: Bond,Daniel R Description: Structural/functional organization of bacteria/archaea, Energy metabolism utilizing light, inorganic/organic chemicals. Cell morphologies, roles/assembly of surface structures. Growth/survival mechanisms in various extreme environments. Adaptation to changing conditions by development of specialized cells/structures, altering metabolic patterns. Bacterial genetics and molecular techniques to understand sophisticated metabolic cascades in a diversity of bacteria - from the bottom of the ocean, to the human gut, to Antarctica. The course blends the study of well understood processes along with new metabolic pathways not yet found in text books.

MICB 4131 Immunology 3 credit(s); prereq [2022 or VPB 2022 or BIOL 2032 or VPB 2032 or VBS 2032 or 3301 or Biol 3301], [BioC 3021 or Biol 3021 or BioC 4331]; Credit will not be granted if credit has been received for: VPM 4131; Instructor: Jemmerson,Ronald R Description: Molecular, genetic, and cellular bases for humoral and cell-mediated immunity; innate immunity; antigen recognition by B and T lymphocytes; interactions between lymphocytes and other cells of the immune system; cytokines; immunoregulation; key aspects of clinical immunology. Students will learn the basic concepts of immunology with some practical applications. This course is targeted toward undergraduate majors in the biological sciences who have previously been introduced to biology and biochemistry. The material covered in the course will enable those interested to enroll in more advanced courses in this field. See the Course Website for further information.

MICB 4161 Eukaryotic Microbiology A-F only, 3 credit(s); prereq 3301, [GCD 3022 or BIOL 4003]; Instructor: Davis,Dana Description: Eukaryotic Microbiology covers topics in eukaryotic microbiology that provide insights into the cell biology of higher eukaryotes, animal and plant pathogenesis, and evolution. Model eukaryotic organisms have included Saccharomyces cerevisiae,
Chlamydomonas reinhardtii, Plasmodium falciparum, Toxoplasma gondii, Candida albicans, and Diatoms! The students are the driving force behind this course and are actively encouraged to participate in discussions, give presentations, and critique the scientific interpretations and conclusions of others.

**Style:** 25% Lecture, 30% Discussion, 5% Small Group Activities, 25% Student Presentation, 10% Guest Speakers, 5% Web Based.

**Grading:** 25% mid exam, 25% final exam, 15% reports/papers, 10% written homework, 25% class participation.

**Exam Format:** Essay

**MICB 4215 Advanced Laboratory: Microbial Physiology and Diversity**

A-F only, 3 credit(s); prereq 3301 or Biol 2032 or VBS 2032 or intro microbiology course with lab;

**Instructor:** Armstrong,Sandra K

**Description:** Advanced laboratory course consisting of the isolation, cultivation and study of a wide variety of prokaryotes from environmental sources. Experiments to examine certain aspects of bacterial physiology are performed on selected isolates. Independence, analytical thinking and written communication skills are emphasized, as is technical proficiency in microbiology and general laboratory methods.

**MICB 4225 Advanced Laboratory: Microbial Genetics**

A-F only, 3 credit(s); prereq BIOL 4003; [Biol 2002 or BIOL 2003 or BIOL 2004 or 3301] recommended;

**Instructor:** Nielsen.Kirsten

**Description:** This course is designed as an introduction to the power of microbial genetics using the baker's yeast Saccharomyces cerevisiae as a model organism. Although yeasts have greater genetic complexity than bacteria, they still share many of the technical advantages that permit rapid progress in understanding principles of molecular genetics and most methods do not differ significantly from methods employed with other microorganisms. In this course, students will learn basic genetic principles such as isolation of mutants, meiotic mapping, mitotic recombination, and gene replacement through hands-on experimentation.

**Style:** 10% Lecture, 10% Discussion, 80% Laboratory.

**Grading:** 15% mid exam, 20% final exam, 44% reports/papers, 15% in-class presentation, 6% class participation.

**MICB 4794W Directed Research: Writing Intensive**

S-N only, 1-7 credit(s), max credits 15, 15 completions allowed; prereq instr consent, dept consent; no more than 7 cr of [4793, 4794, 4993, 4994] may count toward major requirements; Meets CLEq req of Writing Intensive;

**Instructor:** Geller,MD,Melissa A

**Description:** Student may contact the instructor or department for information.

**MICB 4993 Directed Studies**

S-N only, 1-6 credit(s), max credits 36, 6 completions allowed; prereq 3301, dept consent;

**Instructor:** Bey,Russell F

**Description:** Student may contact the instructor or department for information.

**MICB 4994 Directed Research**

S-N only, 1-7 credit(s), max credits 7, 1 completion allowed; prereq Biol/MICB 3301, instr consent; 7 cr or max of 4993 and/or 4994 may count toward major requirements;

**Instructor:** Garry,Daniel Joseph

**Description:** Student may contact the instructor or department for information.

**MICB 5000 Practicum: Teaching**

A-F only, 1 credit(s), max credits 4, 4 completions allowed; prereq [MIMP or MiCaB] grad major or instr consent;

**Instructor:** Jemmerson,Ronald R

**Description:** Student may contact the instructor or department for information.

**MICB 8002 Structure, Function, and Genetics of Bacteria and Viruses**

A-F only, 4 credit(s); prereq [One undergrad or grad course each in [microbiology, genetics, biochemistry]] or instr consent;

**Instructor:** Danny,Gary M

**Description:** Student may contact the instructor or department for information.

**MICA 8010 Microbial Pathogenesis**

A-F only, 3 credit(s); prereq MiCa grad student or instr;

**Instructor:** Southern,Peter

**Description:** Student may contact the instructor or department for information.

**MICA 8011 Current Topics in Immunology**

A-F only, 3 credit(s); prereq MiCa 8003 or instr consent;

**Instructor:** Jenkins,Marc

**Description:** Student may contact the instructor or department for information.

**MICA 8012 Integrated Topics in Microbiology, Immunology, and Cancer Biology**

A-F only, 2 credit(s); prereq MiCa grad student, completion of two of [8002 or 8003 or 8004];

**Instructor:** Pennell PhD,Christopher A

**Description:** Student may contact the instructor or department for information.

**MICA 8094 Research in Microbiology, Immunology, and Cancer Biology**

S-N only, 1 credit(s), max credits 5, 5 completions allowed; prereq 1st yr MiCa grad student;

**Instructor:** Blazar,Bruce R

**Description:** Student may contact the instructor or department for information.

**MICA 8910 Seminar: Faculty Research Topics**

S-N only, 1 credit(s), max credits 10, 10 completions allowed; prereq [MIMP or MiCa] grad student or;

**Instructor:** Pennell PhD,Christopher A

**Description:** Student may contact the instructor or department for information.

**MICA 8920 Seminar: Student Research Topics**

S-N only, 1 credit(s), max credits 10, 10 completions allowed; prereq [MIMP or MiCa] grad student or instr consent;

**Instructor:** Pennell PhD,Christopher A

**Description:** Student may contact the instructor or department for information.

**Military Science**

110 Army

**MIL 103 MS I Zero Credit Lead Lab**

A-F only, 0 credit(s); prereq Concurrent registration is required (or allowed) in 1101;

**Instructor:** Leonard,Doug Richard

**Description:** This is the zero-credit version of the Army ROTC freshman lab. It is only for Army ROTC freshmen who are not UM full-time. Meeting times vary week to week, so you have to talk to the instructor.

**MIL 103 MS I Zero Credit Lead Lab**
A-F only, 0 credit(s); prereq Concurrent registration is required (or allowed) in 1101;  
Instructor: Belinski,Marian Marie  
Description: This is the zero-credit version of the Army ROTC freshman lab. It is only for Army ROTC freshmen who are not UM full-time. Meeting times vary week to week, so you have to talk to the instructor.

MIL 203 MS II Zero Credit Lead Lab  
A-F only, 0 credit(s); prereq Concurrent registration is required (or allowed) in 1201;  
Instructor: Hogan,Timothy M  
Description: Student may contact the instructor or department for information.

MIL 303 MS III Zero Credit Lead Lab  
A-F only, 0 credit(s); prereq Completion of basic courses, Concurrent registration is required (or allowed) in 3301;  
Instructor: Phillips,Ryan Davis  
Description: Student may contact the instructor or department for information.

MIL 1101 Leadership and Personal Development  
A-F only, 1 credit(s);  
Instructor: Leonard,Doug Richard  
Description: Introduction to the Army ROTC Program. Students learn how the U.S. Army is structured, how it operates, and some of the basic Army skills.  
Style: 70% Lecture, 10% Film/Video, 20% Discussion.

MIL 1201 Innovative Team Leadership  
A-F only, 2 credit(s); prereq Concurrent registration is required (or allowed) in lab;  
Instructor: Hogan,Timothy M  
Description: Student may contact the instructor or department for information.

MIL 3301 Adaptive Tactical Leadership  
A-F only, 3 credit(s); prereq Two yrs of ROTC or equiv established by U.S. Army, must see Army ROTC dept officials, Concurrent registration is required (or allowed) in lab;  
Instructor: Phillips,Ryan Davis  
Description: Student may contact the instructor or department for information.

MIL 3403 MS IV One Credit Lead Lab  
A-F only, 1 credit(s); prereq Completion of basic courses, Concurrent registration is required (or allowed) in 3401;  
Instructor: Conway,Michael  
Description: Student may contact the instructor or department for information.

MIL 3501 Marksmanship Training Programs  
A-F only, 2 credit(s);  
Instructor: Lykens,David A  
Description: Student may contact the instructor or department for information.

MIL 3970 Military History  
A-F only, 3 credit(s);  
Instructor: Leonard,Doug Richard  
Description: General overview of all wars fought by the United States from our Revolutionary War to today's Global War on Terrorism. Military tactics as well as wars' impact on society will be covered. Course consists of 2 exams, 2 papers to write, and 700 pages of reading in the text books.  
Style: 50% Lecture, 30% Discussion, 20% Guest Speakers. Lectures are Tuesdays from 5pm-8pm in Armonry room 116A.  
Grading: 20% mid exam, 20% final exam, 35% reports/papers, 25% written homework.

MDGK 1001 Beginning Modern Greek I  
4 credit(s);  
Instructor: Stavrou,Theofanis G  
Description: Student may contact the instructor or department for information.

MDGK 1003 Intermediate Modern Greek I  
4 credit(s); prereq 1002 or instr consent;  
Instructor: Stavrou,Soterios G  
Description: Student may contact the instructor or department for information.

MCDG 8900 Student Research Seminar  
S-N only, 1 credit(s), max credits 10, 10 completions allowed; prereq Grad MCDG or BMBB major dept consent ;  
Instructor: Conklin,Kathleen F  
Description: Student may contact the instructor or department for information.

MCDG 8920 Special Topics  
1-4 credit(s), max credits 8, 8 completions allowed; prereq Grad MCDG or BMBB major or dept consent ;  
Instructor: Towle,Howard  
Description: Student may contact the instructor or department for information.

MCDG 8950 Teaching Practicum  
S-N only, 1 credit(s), max credits 2; prereq Grad MCDG major or dept consent ;  
Instructor: Franco PhD,Peter John  
Description: Student may contact the instructor or department for information.

MCDG 8994 Research  
S-N only, 1-5 credit(s), max credits 10, 10 completions allowed; prereq MCDG grad student or dept consent;  
Instructor: Voytas,Daniel F  
Description: Student may contact the instructor or department for information.

MCDG 8999 Research  
S-N only, 1-4 credit(s), max credits 8, 8 completions allowed; prereq Grad MCDG or BMBB major dept consent;  
Instructor: Towle,Howard  
Grad MCDG or BMBB major dept consent;  
Description: Student may contact the instructor or department for information.

MCDG 8994 Research  
S-N only, 1-5 credit(s), max credits 10, 10 completions allowed; prereq MCDG grad student or dept consent;  
Instructor: Towle,Howard  
Description: Student may contact the instructor or department for information.

323
MORT 3016 Funeral Practice
A-F only, 3 credit(s); prereq Mortuary science major;
Instructor: Mathews, Michael Clark
Description: A study of the practice of funeral service arrangements and the conduct of funerals, including different types of funeral ceremonies, cemetery types and eligibility, obituary writing and use of computers in funeral service.
Style: 80% Lecture, 15% Discussion.
Grading: 60% mid exam, 20% final exam, 10% special projects, 5% in-class presentation, 5% class participation.
Exam Format: Multiple choice

MORT 3021W Funeral Service Psychology
A-F only, 3 credit(s); prereq Introductory course in general psychology; Meets CLE req of Writing Intensive;
Instructor: Ellis, Thomas Matthew
Description: Student may contact the instructor or department for information.

MORT 3022W Funeral Service Arrangements
A-F only, 3 credit(s); prereq 3018, 3021W; Meets CLE req of Writing Intensive;
Instructor: Woosley, Angela
Description: Student may contact the instructor or department for information.

MORT 3025 Business Law
A-F only, 3 credit(s);
Instructor: Meslow, Doug
Description: Student may contact the instructor or department for information.

MORT 3049 Microbiology
A-F only, 2 credit(s); prereq General biology course w/ lab. Students who have already taken a microbiology course are exempt from this course.;
Instructor: Mathews, Michael Clark
Description: Student may contact the instructor or department for information.

MORT 3051 Restorative Art
A-F only, 2 credit(s); prereq [3171 or Concurrent registration is required (or allowed) in 3171], Concurrent registration is required (or allowed) in 3081, mortuary science major;
Instructor: LaCourt, Jody Lynn
Description: Student may contact the instructor or department for information.

MORT 3061 Embalming Theory
A-F only, 3 credit(s); prereq [3171 or Concurrent registration is required (or allowed) in 3171], Concurrent registration is required (or allowed) in 3081, mortuary science major;
Instructor: LaCourt, Jody Lynn
Description: Student may contact the instructor or department for information.

MORT 3065 Embalming Chemistry
A-F only, 3 credit(s); prereq Intro course in general chemistry;
Instructor: Mathews, Michael Clark
Description: Student may contact the instructor or department for information.

MORT 3090 Independent Study Project
1-15 credit(s), max credits 30; prereq Mortuary science major;
Instructor: LuBrant, Michael P
Description: Student may contact the instructor or department for information.

MORT 3091W Independent Study in Funeral Service
1-4 credit(s), max credits 4, 3 completions allowed; prereq Mortuary science major; Meets CLE req of Writing Intensive;
Instructor: LuBrant, Michael P
Description: Student may contact the instructor or department for information.
MUS 1001 Fundamentals of Music
3 credit(s); prerequisite for non-music majors;
Instructor: Damschroder, David A
Description: This course is a printed distance learning section (known as a correspondence course) offered through the University of Minnesota’s Online and Distance Learning (ODL) Program. It's a course in musical notation and structure of Western music. It's intended for non-music majors and will cover topics like rhythm, pitch, meter, key, major, minor, scale, intervals, chords, and harmony. The course work is participatory and includes singing, playing instruments, clapping, and musical perception. Grading is determined from assignments, quizzes, a paper, and final exams. The syllabus is on the class web. The course includes four labs per week. The final exam is comprehensive and includes 50% participation, 25% class discussions, and 25% written exams.
Style: 66% Lecture, 33% Laboratory.
Grading: 10% mid exam, 15% final exam, 10% reports/papers, 20% quizzes, 20% laboratory evaluation, 25% class participation.
Exam Format: Multiple choice and written answer; written and aural examination.

MUS 1013 Rock I: The Historical Origins and Development of Rock Music to 1970
A-F only, 3 credit(s); prerequisite 5012 or concurrent enrollment 5012, instructor consent, department consent;
Instructor: Lubet, Alex J
Description: An examination of the beginnings of rock music from its precursors circa 1900 through the early 1970s: emphasis on early Rock and Roll, Rhythm and Blues, Soul Music, the first British Invasion, and the rock counterculture centered in San Francisco beginning in the mid-60s. The focus is upon rock as music, although lyrics and social milieu are also considered. Course work is comprised of readings, music listening in and out of class, frequent quizzes, and a comprehensive exam.
Style: 30% Lecture, 30% Discussion, 30% Laboratory.
Grading: 20% final exam, 50% reports/papers, 10% special projects, 20% quizzes.
Exam Format: Multiple-choice and other short answers.

MUS 1015 Music and Movies: The Use and Representation of Music and Musicians in Film in a Global Context
A-F only, 4 credit(s); meets CLE req of Diversity and Sociology;
Instructor: Lubet, Alex J
Description: This is a fully online section offered through Online and Distance Learning (ODL) within the University of Minnesota. The focus is on music and film, with an emphasis on the relationship between the two. The course explores the role of music in film, including the use of music and musicians in various genres and contexts. It also examines the historical and sociological contexts of music and film, with a focus on global perspectives. The course includes readings, discussions, and assignments designed to enhance understanding of the relationship between music and film.
Style: Online
Grading: 25% final exam, 50% reports/papers, 25% special projects. See syllabus for course details.
Exam Format: Take-home exam.
MUS 1051 Class Piano for Nonmusic Majors I
OPT No Aud, 2 credit(s);
Instructor: STAFF
Description: A beginning course for non-music majors with little or no keyboard background. Emphasis on functional skills, such as reading, harmonizing, playing by ear and improvising, along with basic technique, elementary repertoire, and music theory (written). Taught by graduate assistants in an electronic multi-piano lab. Includes lecture, group and individual performance, and some individual instruction. Outside practice is required. Practice rooms may be rented through the School of Music. Text: Contemporary Class Piano, 7th ed. by Elyse Mach. Mus 1051 covers Units 1-5, including intervals up to a fifth, major scales and key signatures, major and minor 5-finger patterns and triads, and accompaniments using I, IV and V7 chords.
Grade: 10% Lecture, 90% Laboratory.
Grading: 20% mid exam, 25% final exam, 40% quizzes, 10% class participation, 5% other evaluation. two written projects
Exam Format: Individual keyboard performance (plus some written theory).

MUS 1052 Class Piano for Non Music Majors II
OPT No Aud, 2 credit(s);
Instructor: STAFF
Description: Continuation of Mus 1051. Emphasis on basic functional skills, such as reading, harmonizing, playing by ear and improvising, along with basic technique, elementary repertoire, and music theory (written). Taught by graduate assistants in an electronic multi-piano lab. Includes lecture, group and individual performance, and some individual instruction. Outside practice is required. Practice rooms may be rented through the School of Music. Text: Contemporary Class Piano, 7th ed. by Elyse Mach. Mus 1052 begins with a review of Mus 1051 and covers Units 6-10, including major and minor scales; intervals up to an octave; accompaniment styles; ABA form; syncopation; secondary chords; pedaling; other scale forms; harmonizing with i, iv, and v7 in minor; jazz styles; 2-hand accompaniments; and major and minor 7th chords.
Grade: 10% Lecture, 90% Laboratory.
Grading: 20% mid exam, 25% final exam, 5% special projects, 40% quizzes, 10% class participation.
Exam Format: Individual keyboard performance (plus some written theory).

MUS 1155 Keyboard Skills I
A-F only, 2 credit(s); prereq Keyboard major or music major with extensive keyboard background or instr consent;
Instructor: STAFF
Description: Mus 1155 Keyboard Skills I. A functional piano skills course for freshman keyboard majors and other music majors with extensive keyboard background, to be taken with freshman music theory. Emphasis is on reading, transposing, harmonizing, improvising and playing by ear, along with keyboard theory, technique, and music learning skills. Taught in an electronic piano lab. (Advanced non-keyboard majors may substitute one semester of Mus 1155 for Mus 1151-1152 with instructor permission.) Text: Harmonization at the Piano by Frakenpohl plus supplementary materials available on the course website. 1155 covers chapters 1-6 plus 3-part vocal scores.
Grade: 10% Lecture, 90% Laboratory.
Grading: 20% mid exam, 25% final exam, 40% quizzes, 15% in-class presentation, 5% class participation.

MUS 1471 Guitar: Class Lessons I
A-F only, 2 credit(s);
Instructor: STAFF
Description: Fundamentals for the beginning guitarist; progressive development of skills. Beginning finger-style technique. Introductory sight-reading skills. Emphasis on performance, practice methods, posture, and sound production. Students must furnish an acoustic guitar, preferably a nylon-string guitar.
Grade: 40% Lecture. in-class performance.
Grading: 25% mid exam, 25% final exam, 50% class participation.
Exam Format: performance

MUS 1501 Theory and Analysis of Tonal Music I
A-F only, 2 credit(s); prereq dept consent;
Instructor: STAFF
Description: The first semester of a four-semester sequence of courses devoted to tonal music theory. The focus of these courses is on analysis of music of the eighteenth and nineteenth centuries, part-writing (learning how to write music in historical styles), and skills including sight-singing, ear-training, and keyboard performance. Music 1501 is intended primarily for music majors and music minors. Non-majors generally enroll in Mus 1001 unless they intend to continue in the theory sequence beyond a single term.
Grade: 40% Lecture, 40% Discussion, 20% Laboratory.

MUS 1801W Music, Society, and Cultures
A-F only, 3 credit(s); prereq [Music major or instr consent], permission number; Meets CLE req of Arts/Humanities; meets CLE req of Global Perspectives; meets CLE req of Writing Intensive;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

MUS 1804 World Music
3 credit(s); Meets CLE req of Arts/Humanities; meets CLE req of Global Perspectives;
Instructor: STAFF
Description: If you love music, this is the course for you. The only prerequisite is curiosity. Whether you have musical training or not, music is an integral part of your life. You are not only surrounded by it, but you use it to define who you are and what you value in life. This is a great opportunity for non-music majors to get introduced to music from a world music perspective. Explore this exciting world and gain an understanding of basic musical elements (rhythm, harmony, melody, texture, and timbre). You will be taken on a musical tour around the globe, focusing on a small number of representative cultures. Our goal is to understand how each representative musical case study fits into a larger cultural, social, and political context. What does it mean to be a musician? How do people conceptualize music? How does music relate to a culture’s daily
life and understanding of the universe? These are some of the questions we will be addressing. This course will broaden your horizons and sharpen your critical thinking. You will also have some hands-on musical experiences (you will not be evaluated on the basis of your musical ability). Using musical case studies from around the world, we will explore differences in aesthetics that stem from different lifestyles and values. The course objectives will be accomplished through lectures, video viewing, lots of listening, some hands-on musical experience, selected readings, and assigned concert attendance.

MUS 1908W Topics: Freshman Seminar
A-F only, 3 credit(s), max credits 6; prereq Fr; Meets CLE req of Civic Life and Ethics; meets CLE req of Writing Intensive;
Instructor: Painter PhD,Karen
Description: Does art sustain those in power or can it be independent and even adversarial? Are artists, musicians, and critics responsible for the effect of what they produce and publish, regardless of their intentions? The relationship of art and politics is contested in every era and under all sorts of regimes. Can those in power use the arts or the media to legitimate their rule for better or worse? Can the arts maintain their independence? What role do the listener or amateur musician play in pursuing a political agenda or resisting? The seminar will examine the role of art and art censorship in civic life by focusing on the role of music in one of history's most brutal regimes, which was also among the greatest patrons of music. What did mean for a musician, conductor, or composer to collaborate, and what were the degrees of collaboration and associated guilt and punishment? Did music matter to the built up support for Nazism or the conformism required by the totalitarian state (even if some aspects of the regime defied this unity)? And finally it asks how should citizens of democratic societies commemorate and judge the choices that artists made in harsher times.
Style: 20% Lecture, 20% Film/Video, 40% Discussion, 20% Student Presentation
Grading: 65% reports/papers, 20% reflection paper, 15% class participation. Weekly reaction emails are 1-2 paragraphs. The two lowest grades will not count, and you may miss 2 weeks.

MUS 1910W Topics: Freshman Seminar
A-F only, 3 credit(s); prereq freshman; Meets CLE req of Writing Intensive;
Instructor: Currie,Scott
Description: What's on your iPod and what does it say about where you've been, who you are, and what you want to be? How can we begin to understand the meaning of the sounds that fill our lives and come to define our selves? The colloquium format of this seminar will allow us to sample historical, anthropological, and theoretical perspectives on the experience of sound, offering conceptual frameworks to inspire and guide further investigation. Independent research projects will give you the chance to apply these approaches to the multi-faceted study of your own sonic world(s). In this course, the ability to read, write, or play music may be helpful but not at all essential; the willingness, however, to listen deeply and think critically will be indispensable.
Style: 50% Lecture, 33% Discussion, 5% Student Presentation, 12% Guest Speakers.
Grading: 75% reports/papers, 15% in-class presentation, 10% class participation.

MUS 3021 Introduction to Music
3 credit(s); Credit will not be granted if credit has been received for: MUS 1021; Meets CLE req of Arts/Humanities;
Instructor: Mercer-Taylor,Peter J
Description: This course is intended as an introduction to the process of serious musical listening. Though the styles, forms, and cultural foundations of European classical music will form the core of our subject matter and it is exclusively on this material that you will be graded-we will stray repeatedly into popular music traditions in the course of our explorations.
Style: 85% Lecture, 15% Discussion.
Grading: 42% mid exam, 32% final exam, 16% reports/papers, 10% other evaluation. attendance
Exam Format: Identification and short-answer questions

MUS 3045 The Avant-Garde
A-F only, 3 credit(s); Instructor: Lubet,Alex J
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policies, including fee and financial aid information. No one can truly “appreciate” music without the experiences of performance and composition. Taking as a point of departure the Avant-Garde’s notions that all sounds are potentially musical and that all people are potentially musicians—ideas that are also among my most cherished musical beliefs—you will be asked to create a musical “performance event” that includes at least one of your own original compositions. While you may at first doubt your ability to accomplish this formidable artistic endeavor, let me assure you that, based on my years of experience teaching this course, you can do this and you will enjoy it! You may like it so much that, long after you have completed this course, you may, like several of my students, come to think of yourself as a composer and musician and continue to create and perform works of sonic art. Nothing would please me more.
Style: Online
Grading: Course Completion Calendar (1%) Seven journal assignments (49%) Final project (50%)

MUS 3241 Vocal Literature (German Lieder) and Pedagogy
A-F only, 1 credit(s); prereq [Vocal performance or accompanying major], 2 yrs music theory/history;
Instructor: Zaro-Mullins,Wendy
Description: Student may contact the instructor or department for information.

MUS 3262 English Diction for Singers
A-F only, 1 credit(s); prereq Voice or choral music major, concurrent enrollment in applied voice;
Instructor: Zawisza,Philip David
Description: Student may contact the instructor or department for information.

MUS 3263 German Diction for Singers
A-F only, 1 credit(s); prereq Voice or choral music major, concurrent enrollment in applied voice;
Instructor: Zawisza,Philip David
Description: Student may contact the instructor or department for information.

MUS 3340 Jazz Ensemble
A-F only, 1 credit(s), max credits 8, 8 completions allowed; prereq Audition, instr consent;
Instructor: Sorenson,Dean Patrick
Description: The University Jazz Ensembles play a wide variety of big band repertoire and perform for many events, both on and off campus. Entrance is limited to instruments that are traditionally a part of the big band: trumpet, trombone, saxophone, piano, guitar, bass, drums, and percussion. Placement is by audition, and registration is not permitted until after an audition has taken place.
Style: Rehearsal/performance

MUS 3350 Jazz Combo
A-F only, 1 credit(s), max credits 8, 8 completions allowed; prereq Audition, instr consent;
Instructor: STAFF
Description: Jazz combos study a wide range of small group jazz literature. Time is also spent on improvisation and performance practice concepts. Performances are scheduled each semester. Ensembles are open to music majors and non-music majors, and auditions are required. Students are placed according to their ability and experience.
Style: performance/rehearsal

MUS 3400 University and Campus Bands
2 credit(s), max credits 20, 10 completions allowed;
Instructor: Zarco,John
Description: Student may contact the instructor or department for information.
University of Minnesota - Course Guide for Twin Cities Campus

Fall 2011

for information.

MUS 3400 University and Campus Bands
2 credit(s), max credits 20, 10 completions allowed;
Instructor: Neal,Alicia M
Description: Comprised of both music majors and non-music majors, the University Band rehearses twice per week and performs 2-3 concerts per semester. The ensemble is open to woodwind, brass, and percussion players who have prior playing experience.

MUS 3400 University and Campus Bands
2 credit(s), max credits 20, 10 completions allowed;
Instructor: Allen,Eric Matthew
Description: Student may contact the instructor or department for information.

MUS 3410 University Wind Bands
A-F only, 1 credit(s), max credits 14, 14 completions allowed; prereq Audition, instr consent;
Instructor: Luckhardt,Jerry M
Description: A music ensemble of select wind and percussion players. The ensemble includes a number of undergraduate and graduate majors from other disciplines. Symphonic band performs 4 to 5 concerts each academic year. Admission is by audition only.
Style: rehearsal
Grading: rehearsal preparation and performance

MUS 3420 Orchestra
A-F only, 1 credit(s), max credits 8, 8 completions allowed; prereq Audition, instr consent;
Instructor: Smith,Mark Russell
Description: Student may contact the instructor or department for information.

MUS 3440 Chamber Ensemble
A-F only, 1 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: STAFF
Description: Chamber ensembles provide an opportunity for music majors to study and perform chamber music (generally works for three or more instruments) with a faculty coach. There is at least one public performance by each group during the semester. Qualified non-music majors may be permitted to register for chamber music with instructor permission following an audition. For information regarding participation in the School of Music chamber music program, please see: http://www.music.umn.edu/enscomp/chamber.php
Style: 100% Laboratory.
Grading: performances

MUS 3460 Marching Band
A-F only, 2 credit(s), max credits 8, 4 completions allowed; prereq instr consent;
Instructor: Diem,Timothy W
Description: One of the most exciting and highly visible organizations on campus, the 300+ member Minnesota Marching Band provides enthusiastic support to the University's athletics programs, represents the University with pride at home and away, and plays a vital role in the social lives of its members. The band is designed for undergraduate and graduate students representing a wide variety of academic disciplines across campus. Marching Band season officially begins in late August with the training period known as Spat Camp and concludes with the Indoor Concerts in early December. Currently, no formal audition is necessary, but registration for Spat Camp with the Marching Band Office is required by June 30.
Style: rehearsal
Grading: rehearsal preparation and performance

MUS 3490 Athletics Bands
A-F only, 1 credit(s), max credits 16, 16 completions allowed; prereq instr consent;
Instructor: Diem,Timothy W
Description: Three Athletic Pep bands, which play for men's hockey and basketball and women's volleyball, basketball and hockey, begin in September. Each band will perform 25 - 30 times throughout the year including regular season and post season events. Audition is required and are held in early September for formation of the three groups. Year-long participation is required.

MUS 3501 Theory and Analysis of Tonal Music III
A-F only, 2 credit(s); prereq ([1501, 1502, 1511, 1512] with grade of at least C-) or diagnostic test administered by School of Music;
Instructor: Bribitzer-Stull,Matt
Description: Student may contact the instructor or department for information.

MUS 3506 Theory and Analysis of American Popular Music
A-F only, 3 credit(s); prereq [3501, 3511] with a grade of C- or better;
Instructor: Gopinath,Sumanth S
Description: Student may contact the instructor or department for information.

MUS 3508 Review of Tonal Theory
3 credit(s); prereq Theory placement exam;
Instructor: Orosz,Jeremy W
Description: Student may contact the instructor or department for information.

MUS 3511 Ear-Training and Sight-Singing III
A-F only, 1 credit(s); prereq [[1501, 1511] with grade of at least C-] or diagnostic test administered by School of Music], [music major or instr consent ];
Instructor: Bribitzer-Stull,Matt
Description: Student may contact the instructor or department for information.

MUS 3518 Review of Ear-Training and Sight-Singing
1 credit(s); prereq Theory Placement Exam;
Instructor: STAFF
Description: A course intended for transfer and graduate music majors who, based on the Placement Exam for Entering Students, require remediation in ear-training and sight-singing. Mus 3518 covers at a fast pace the ear-training content of Mus 1502 (Theory II) and Mus 3501 (Theory III). After Mus 3518, the sequence continues with Mus 3502 (for students who need both theory and ear-training review for the contents of Theory IV) or Mus 3511 (for students who need only ear-training review for the contents of Theory IV).
Style: 40% Discussion, 50% Laboratory. sight-singing auditions
Grading: 20% mid exam, 20% final exam, 10% quizzes, 50% other evaluation. sight-singing auditions
Exam Format: dictation

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
MUS 3602W History of Western Music II
A-F only, 3 credit(s); prereq 1502, 3601, music major, instr consent; Meets CLE req of Writing Intensive;
Instructor: Harris, Kelley A
Description: Student may contact the instructor or department for information.

MUS 3950 Topics in Music
1-3 credit(s), max credits 15, 5 completions allowed;
Instructor: Mazzola PhD,Guerrino

MUS 4504 Intensive Theory and Analysis of 20th-Century Music
A-F only, 2 credit(s); prereq [3502, 3512] or instr consent;
Instructor: Cherlin, Michael
Description: Student may contact the instructor or department for information.

MUS 4505 Jazz Theory
A-F only, 3 credit(s); prereq [3501, 3511] with grades of at least C-
Instructor: Sorenson, Dean Patrick
Description: Jazz Theory explores the music theory concepts that exist within jazz performance, composition, and improvisation. The course is intended for upper division undergraduates or graduate students who have a good background in traditional music theory.
Style: 100% Lecture.
Grading: 15% mid exam, 30% final exam, 13% quizzes, 12% problem solving, 30% other evaluation.
Exam Format: Two other exams, in addition to the final and the midterm

MUS 4514 Ear-Training and Sight-Singing for 20th-Century Music
A-F only, 1 credit(s); prereq Completion of [3502, 3512] with grade of at least C-
Instructor: Cherlin, Michael
Description: Student may contact the instructor or department for information.

MUS 5230 Chorus
1-2 credit(s), max credits 16, 8 completions allowed; prereq Choral and/ or instrumental music background; audition, instr consent;
Instructor: Olson, Matthew J
Description: Student may contact the instructor or department for information.

MUS 5230 Chorus
1-2 credit(s), max credits 16, 8 completions allowed; prereq Choral and/ or instrumental music background; audition, instr consent;
Instructor: Hayes, W. Bryce
Description: Student may contact the instructor or department for information.

MUS 5240 University Singers
A-F only, 1 credit(s), max credits 8, 8 completions allowed; prereq Audition, instr consent;
Instructor: Romey, Kathy Saltzman
Description: Student may contact the instructor or department for information.

MUS 5250 Opera Workshop and Ensemble
A-F only, 2 credit(s), max credits 16, 8 completions allowed; prereq audition, instr consent;
Instructor: Walsh, David Allan
Description: Section 1 of Opera Workshop is designed to provide performance-oriented opera and music theatre singers with theoretical and practical instruction in opera stagecraft. The course will combine theatre games and exercises, improvisations, script readings, plus rehearsal of selected opera and music theatre repertoire appropriate to the skill development of the individual student. The 'non-production' nature of this course means that the student has the possibility of exploring and 'trying things out'. Section 2 of Opera Workshop will include participation in the chorus of Opera Theatre productions, where appropriate. Participation in this class (either section) will be determined through an audition process, and/or interview with the instructor, and will be restricted to graduate students and juniors/seniors in the undergraduate programme (exceptions to this restriction may be made on an individual basis, in discussion with the instructor)." Style: 20% Discussion. Practical instruction in stagecraft Grading: 20% in-class presentation, 80% class participation. Exam Format: There are no formal exams. The in-class participation and the presentation of improvis, script readings and scene studies will be the basis for grading the students accomplishments and progress.

MUS 5271 Diction for Singers I
A-F only, 2 credit(s); prereq 12 cr MusA 1304 or grad music major or instr consent;
Instructor: Zawisza, Philip David
Description: Student may contact the instructor or department for information.

MUS 5275 Vocal Pedagogy I
3 credit(s); prereq Sr vocal major or instr consent;
Instructor: Del Santo, Jean Marie
Description: Student may contact the instructor or department for information.

MUS 5280 Opera Theatre
A-F only, 2 credit(s), max credits 16, 8 completions allowed; prereq audition, instr consent;
Instructor: Walsh, David Allan
Description: The Opera Theatre programme is designed to provide performance-oriented opera and music theatre singers with theoretical and practical instruction in opera stagecraft, as well as genuine operatic performance experience. Two fully-staged productions per school year, with all the relevant staging demands, offer the student performer an opportunity to showcase her/his talent in a public presentation. Opera Theatre classes will be determined on the basis of audition.
Style: 20% Discussion. Direct practical staging instruction Grading: 100% other evaluation. Staging and musical work
Exam Format: Performances of the opera production each semester

MUS 5340 Jazz Ensemble
A-F only, 1 credit(s), max credits 6, 6 completions allowed; prereq audition, instr consent;
Instructor: Sorenson, Dean Patrick
Description: The University Jazz Ensembles play a wide variety of big band repertoire and perform for many events; both on and off campus. Entrance is limited to instruments that are traditionally a part of the big band: trumpet, trombone, saxophone, piano, guitar, bass, drums, and percussion. Placement is by audition, and registration is not permitted until after an audition has taken place.
Style: Rehearsals/performance
MUS 5410 University Wind Bands
A-F only, 1 credit(s), max credits 14, 14 completions allowed; prereq audition, instr consent;
Instructor: Luckhardt, Jerry M
Description: A music ensemble of select wind and percussion players. The ensemble includes a number of undergraduate and graduate majors from other disciplines. Symphonic band performs 4 to 5 concerts each academic year. Admission is by audition only.
Style: rehearsal
Grading: rehearsal preparation and performance

MUS 5420 Orchestra
A-F only, 1 credit(s), max credits 8, 8 completions allowed; prereq audition, instr consent;
Instructor: Smith, Mark Russell
Description: Student may contact the instructor or department for information.

MUS 5430 Contemporary Music Workshop
A-F only, 1 credit(s), max credits 8, 8 completions allowed; prereq instr consent;
Instructor: Dillon, James
Description: Student may contact the instructor or department for information.

MUS 5440 Chamber Ensemble
A-F only, 1 credit(s), max credits 8, 8 completions allowed; prereq audition, instr consent;
Instructor: STAFF
Description: Chamber ensembles provide an opportunity for music majors to study and perform chamber music (generally works for three or more instruments) with a faculty coach. There is at least one public performance by each group during the semester. Qualified non-music majors may be permitted to register for chamber music with instructor permission following an audition. For information regarding participation in the School of Music chamber music program, please see: http://www.music.umn.edu/enscomp/chamber.php
Grading: performance

MUS 5460 World Music Ensemble: Afro-Brazilian Carnaval
1 credit(s), max credits 8, 8 completions allowed;
Instructor: Currie, Scott
Description: Student may contact the instructor or department for information.

MUS 5471 Woodwind Literature and Pedagogy I
A-F only, 2 credit(s); prereq Music major or instr consent;
Instructor: Fiterstein, Alexander
Description: Student may contact the instructor or department for information.

MUS 5490 Percussion Ensemble
A-F only, 1 credit(s), max credits 10, 10 completions allowed; prereq instr consent;
Instructor: Meza, Fernando A.
Description: Practice and performance of standard and contemporary compositions for percussion instruments in various combinations.
Style: 20% Lecture, 80% Laboratory.
Grading: 40% in-class presentation, 60% laboratory evaluation.
Exam Format: no exams

MUS 5490 Percussion Ensemble
A-F only, 1 credit(s), max credits 10, 10 completions allowed; prereq instr consent;
Instructor: Bergmark, Krissey
Description: Student may contact the instructor or department for information.

MUS 5540 Topics in Music
A-F only, 1 credit(s), max credits 10, 10 completions allowed; prereq instr consent;
Instructor: Smith, Mark Russell
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
MUS 5950 Topics in Music
1-4 credit(s), max credits 15, 15 completions allowed;
Instructor: Currie,Gabriela
Description: Student may contact the instructor or department for information.

MUS 8112 Instrumental Repertoire: Reduction and Realization
A-F only, 2 credit(s); prereq Grad student in accompanying/conducting;
Instructor: Lovelace,Timothy
Description: Student may contact the instructor or department for information.

MUS 8131 Advanced Keyboard Skills
A-F only, 2 credit(s); prereq Grad student in music or instr consent;
Instructor: Billmeyer,Dean W
Description: Student may contact the instructor or department for information.

MUS 8182 Opera History in Context: Monteverdi and Mozart
A-F only, 3 credit(s); prereq Grad student in music or instr consent;
Instructor: Walsh,David Allan
Description: Student may contact the instructor or department for information.

MUS 8255 Choral Literature: Baroque Era to the Present
A-F only, 3 credit(s); prereq instr consent;
Instructor: Mehaffey,Matthew Wayne
Description: Student may contact the instructor or department for information.

MUS 8450 Graduate Seminar in Conducting
A-F only, 3-4 credit(s), max credits 32, 8 completions allowed; prereq Grad student in conducting or instr consent;
Instructor: Kirchhoff,Craig J
Description: Student may contact the instructor or department for information.

MUS 8450 Graduate Seminar in Conducting
A-F only, 3-4 credit(s), max credits 32, 8 completions allowed; prereq Grad student in conducting or instr consent;
Instructor: Mehaffey,Matthew Wayne
Description: Student may contact the instructor or department for information.

MUS 8450 Graduate Seminar in Conducting
A-F only, 3-4 credit(s), max credits 32, 8 completions allowed; prereq Grad student in conducting or instr consent;
Instructor: Smith,Mark Russell
Description: Student may contact the instructor or department for information.

MUS 8550 Composition
A-F only, 3 credit(s), max credits 12, 4 completions allowed; prereq instr consent;
Instructor: Lubet,Alex J
Description: Student may contact the instructor or department for information.

MUS 8550 Composition
A-F only, 3 credit(s), max credits 12, 4 completions allowed; prereq instr consent;
Instructor: Dillon,James
Description: Student may contact the instructor or department for information.

MUS 8560 Readings in Music Theory
A-F only, 3 credit(s), max credits 12, 4 completions allowed; prereq instr consent;
Instructor: Bribitzer-Stull,Matt
Description: Student may contact the instructor or department for information.

MUS 8560 Seminar: Advanced Research in Historical Musicology
A-F only, 3 credit(s), max credits 12, 4 completions allowed; prereq Musicology or theory emphasis or instr consent;
Instructor: Rahaim,Matthew
Description: Student may contact the instructor or department for information.

MUS 8640 Seminar in Musicology
A-F only, 3 credit(s), max credits 12, 4 completions allowed; prereq Musicology or theory emphasis or instr consent;
Instructor: Billmeyer,Dean W
Description: Student may contact the instructor or department for information.

MUS 8850 Topics in Tonal Analysis
A-F only, 3 credit(s), max credits 12, 4 completions allowed; prereq instr consent;
Instructor: Cherlin,Michael
Description: Student may contact the instructor or department for information.

MUS 8851 Schenkerian Theory and Analysis I
A-F only, 3 credit(s); prereq instr consent;
Instructor: Damschroder,David A
Description: Student may contact the instructor or department for information.

MUS 8644 Seminar: Advanced Research in Historical Musicology
A-F only, 3 credit(s); prereq Undergrad music degree;
Instructor: Currie,Gabriela
Description: Student may contact the instructor or department for information.

MUSA 1101 Piano: Elective (non-major in music)
A-F only, 2-4 credit(s), max credits 32, 8 completions allowed; prereq dept consent;
Instructor: STAFF
Description: Individual piano instruction by graduate piano TAs for non-music majors with prior piano study. Weekly 30-minute or 60-minute lessons are arranged individually with the instructor, along with a short jury exam at the end of the semester. Requires permission by the Class Piano Coordinator or a piano TA. Information on applied music fees and how to obtain permission to register may be obtained from the School of Music Office, Room 100 Ferguson Hall, (612) 624-5740, or at http://music.umn.edu/students/Piano%20Ap%201101_3101.pdf
Style: individual lessons
Grading: 40% final exam, 60% other evaluation. weekly lesson preparation
Exam Format: individual keyboard performance (jury)

MUSA 1103 Organ: Elective (non-major in music)
A-F only, 2-4 credit(s), max credits 32, 8 completions allowed; prereq dept consent;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

MUSA 1301 Piano: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Shaw,Paul Magnus
Description: Student may contact the instructor or department for information.

MUSA 1301 Piano: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Braginsky,Alexander
Description: Student may contact the instructor or department for information.
MUSA 1303 Organ: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Billmeyer, Dean W
Description: Student may contact the instructor or department for information.

MUSA 1304 Voice: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Del Santo, Jean Marie
Description: Student may contact the instructor or department for information.

MUSA 1304 Voice: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Kierig, Barbara G
Description: Student may contact the instructor or department for information.

MUSA 1304 Voice: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Zaro-Mullins, Wendy
Description: Student may contact the instructor or department for information.

MUSA 1304 Voice: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: De Haan, John
Description: Student may contact the instructor or department for information.

MUSA 1305 Violin: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Kim, Young-Nam
Description: Student may contact the instructor or department for information.

MUSA 1305 Violin: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: O'Reilly, Sally P
Description: Student may contact the instructor or department for information.

MUSA 1305 Violin: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Bjork, Mark P
Description: Student may contact the instructor or department for information.

MUSA 1306 Viola: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Konkol, Kory Bernard
Description: Student may contact the instructor or department for information.

MUSA 1307 Cello: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Remenikova, Tanya
Description: Student may contact the instructor or department for information.

MUSA 1308 Double Bass: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Brown, Christopher Craig
Description: Student may contact the instructor or department for information.

MUSA 1309 Flute: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Bogorad, Julia A
Description: Student may contact the instructor or department for information.

MUSA 1309 Flute: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Davis, Immanuel
Description: Student may contact the instructor or department for information.

MUSA 1311 Oboe: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Snow, John D
Description: Student may contact the instructor or department for information.

MUSA 1312 Clarinet: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Fiterstein, Alexander
Description: Student may contact the instructor or department for information.

MUSA 1313 Saxophone: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Rousseau, Eugene E
Description: Student may contact the instructor or department for information.

MUSA 1314 Bassoon: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Nielsubowski, Norbert John
Description: Student may contact the instructor or department for information.

MUSA 1315 French Horn: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Lemen, Caroline May
Description: Student may contact the instructor or department for information.

MUSA 1315 French Horn: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Gast, Michael C
Description: Student may contact the instructor or department for information.

MUSA 1316 Trumpet: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Baldwin, David B
Description: Student may contact the instructor or department for information.

MUSA 1317 Trombone: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
MUSA 1317 Trombone: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions
allowed; prereq Audition, dept consent ;
Instructor: Ashworth,Thomas Jackson
Description: Student may contact the instructor or department for information.

MUSA 1318 Euphonium: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions
allowed; prereq Audition, dept consent ;
Instructor: Billmeyer,Dean W
Description: Student may contact the instructor or department for information.

MUSA 1319 Tuba: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions
allowed; prereq Audition, dept consent ;
Instructor: Billmeyer,Dean W
Description: Student may contact the instructor or department for information.

MUSA 1321 Percussion: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions
allowed; prereq Audition, dept consent ;
Instructor: Hey,Philip C
Description: Student may contact the instructor or department for information.

MUSA 1322 Harp: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions
allowed; prereq Audition, dept consent ;
Instructor: Kienzle,Kathy
Description: Student may contact the instructor or department for information.

MUSA 1401 Piano: Music Major Secondary (undergraduate)
A-F only, 2-4 credit(s), max credits 16, 8 completions
allowed; prereq Music major, dept consent ;
Instructor: STAFF
Description: Individual piano instruction by graduate piano TAs for music majors who have completed Class Piano Mus 1151-1152 or equivalent proficiency. Weekly 30-minute or 60-minute lessons are arranged individually with the instructor, along with a short jury exam at the end of the semester. Information on applied music fees and how to register may be obtained from the School of Music Office, Room 100 Ferguson Hall, or at http://music.umn.edu/students/Piano%20Ap%201401%20.pdf
Style: individual lessons
Grading: 40% final exam, 60% other evaluation. weekly lesson preparation
Exam Format: individual keyboard performance (jury)

MUSA 1403 Organ: Music Major Secondary (undergraduate)
A-F only, 2-4 credit(s), max credits 16, 8 completions
allowed; prereq Audition, dept consent ;
Instructor: Billmeyer,Dean W
Description: Student may contact the instructor or department for information.

MUSA 1902 Harpsichord: Music Major Transfer
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed;
prereq Audition, dept consent ;
Instructor: Billmeyer,Dean W
Description: Student may contact the instructor or department for information.

MUSA 1903 Organ: Music Major Transfer
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed;
prereq Audition, dept consent ;
Instructor: Billmeyer,Dean W
Description: Student may contact the instructor or department for information.

MUSA 1906 Viola: Music Major Transfer
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed;
prereq Audition, dept consent ;
Instructor: Konkol,Korey Bernard
Description: Student may contact the instructor or department for information.

MUSA 1907 Cello: Music Major Transfer
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed;
prereq Audition, dept consent ;
Instructor: Remenikova,Tanya
Description: Student may contact the instructor or department for information.

MUSA 1911 Oboe: Music Major Transfer
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed;
prereq Audition, dept consent ;
Instructor: Snow,John D
Description: Student may contact the instructor or department for information.

MUSA 1912 Clarinet: Music Major Transfer
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed;
prereq Audition, dept consent ;
Instructor: Fiterstein,Alexander
Description: Student may contact the instructor or department for information.

MUSA 1915 French Horn: Music Major Transfer
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed;
prereq Audition, dept consent ;
Instructor: Lemen,Caroline May
Description: Student may contact the instructor or department for information.

MUSA 1917 Trombone: Music Major Transfer
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed;
prereq Audition, dept consent ;
Instructor: Tranter,John Harrington
Description: Student may contact the instructor or department for information.

MUSA 1918 Euphonium: Music Major Transfer
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed;
MUSA 1919 Tuba: Music Major Transfer
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed;
prereq Audition, dept consent ;
Instructor: Campbell, Steven C
Description: Student may contact the instructor or department for information.

MUSA 1922 Harp: Music Major Transfer
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed;
prereq Audition, dept consent ;
Instructor: Kienzle, Kathy
Description: Student may contact the instructor or department for information.

MUSA 2301 Piano: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, instr consent ;
Instructor: Braginsky, Alexander
Description: Student may contact the instructor or department for information.

MUSA 2303 Organ: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Billmeyer, Dean W
Description: Student may contact the instructor or department for information.

MUSA 2304 Voice: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Del Santo, Jean Marie
Description: Student may contact the instructor or department for information.

MUSA 2304 Voice: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Zaro-Mullins, Wendy
Description: Student may contact the instructor or department for information.

MUSA 2305 Violin: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Kim, Young-Nam
Description: Student may contact the instructor or department for information.

MUSA 2305 Violin: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: O'Reilly, Sally P
Description: Student may contact the instructor or department for information.

MUSA 2306 Viola: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Konkol, Korey Bernard
Description: Student may contact the instructor or department for information.

MUSA 2307 Cello: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Remenikova, Tanya
Description: Student may contact the instructor or department for information.

MUSA 2308 Double Bass: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Brown, Christopher Craig
Description: Student may contact the instructor or department for information.

MUSA 2309 Flute: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Davis, Immanuel
Description: Student may contact the instructor or department for information.

MUSA 2311 Oboe: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Snow, John D
Description: Student may contact the instructor or department for information.

MUSA 2312 Clarinet: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Melfert-Nelson, Karrin Diane
Description: Student may contact the instructor or department for information.

MUSA 2312 Clarinet: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Hara, Burt T
Description: Student may contact the instructor or department for information.

MUSA 2313 Saxophone: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Wyatt, Angela J.
Description: Student may contact the instructor or department for information.

MUSA 2313 Saxophone: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed;
prereq Audition, dept consent ;
Instructor: Rousseau, Eugene E
Description: Student may contact the instructor or department for information.
MUSA 2314 Bassoon: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Miller Jr, John W
Description: Student may contact the instructor or department for information.

MUSA 2315 French Horn: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Lemen, Caroline May
Description: Student may contact the instructor or department for information.

MUSA 2315 French Horn: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Zawisza, Philip David
Description: Student may contact the instructor or department for information.

MUSA 2316 Trumpet: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Baldwin, David B
Description: Student may contact the instructor or department for information.

MUSA 2317 Trombone: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Tranter, John Harrington
Description: Student may contact the instructor or department for information.

MUSA 2317 Trombone: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Ashworth, Thomas Jackson
Description: Student may contact the instructor or department for information.

MUSA 2318 Euphonium: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Tranter, John Harrington
Description: Student may contact the instructor or department for information.

MUSA 2319 Tuba: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Campbell, Steven C
Description: Student may contact the instructor or department for information.

MUSA 2321 Percussion: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Meza, Fernando A.
Description: Student may contact the instructor or department for information.

MUSA 2323 Guitar: Music Major
A-F only, 2-4 credit(s), max credits 16, 8 completions allowed; prereq Audition, dept consent;
Instructor: Fiegel, James F
Description: Student may contact the instructor or department for information.

MUSA 3101 Piano: Elective (non-major in music)
A-F only, 2-4 credit(s), max credits 16, 4 completions allowed; prereq dept consent;

Instructor: Staff
Description: Individual piano instruction by graduate piano TAs for upper-division non-music majors with prior piano study.
Weekly 30-minute or 60-minute lessons are arranged individually with the instructor, along with a short jury exam at the end of the semester. Requires permission by the Class Piano Coordinator or a piano TA. Information on applied music fees and how to obtain permission to register may be obtained from the School of Music Office, Room 100 Ferguson Hall, (612) 624-5740, or at http://music.umn.edu/piano.

MUSA 3302 Harpsichord: Music Major
A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Billmeyer, Dean W
Description: Student may contact the instructor or department for information.

MUSA 3303 Organ: Music Major
A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Billmeyer, Dean W
Description: Student may contact the instructor or department for information.

MUSA 3304 Voice: Music Major
A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Del Santo, Jean Marie
Description: Student may contact the instructor or department for information.

MUSA 3304 Voice: Music Major
A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Kierig, Barbara G
Description: Student may contact the instructor or department for information.

MUSA 3304 Voice: Music Major
A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Zaro-Mullins, Wendy
Description: Student may contact the instructor or department for information.

MUSA 3304 Voice: Music Major
A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Billmeyer, Dean W
Description: Student may contact the instructor or department for information.
Description: Student may contact the instructor or department for information.

**MUSA 3305 Violin: Music Major**

A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Kim, Young-Nam
Description: Student may contact the instructor or department for information.

**MUSA 3305 Violin: Music Major**

A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: O'Reilly, Sally P
Description: Student may contact the instructor or department for information.

**MUSA 3305 Violin: Music Major**

A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Bjork, Mark P
Description: Student may contact the instructor or department for information.

**MUSA 3306 Viola: Music Major**

A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Konkol, Korey Bernard
Description: Student may contact the instructor or department for information.

**MUSA 3306 Viola: Music Major**

A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Turner, Thomas
Description: Student may contact the instructor or department for information.

**MUSA 3307 Cello: Music Major**

A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Remenikova, Tanya
Description: Student may contact the instructor or department for information.

**MUSA 3308 Double Bass: Music Major**

A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Brown, Christopher Craig
Description: Student may contact the instructor or department for information.

**MUSA 3309 Flute: Music Major**

A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Bogorad, Julia A
Description: Student may contact the instructor or department for information.

**MUSA 3309 Flute: Music Major**

A-F only, 2-4 credit(s), max credits 24, 8 completions allowed; prereq Audition, dept consent;
Instructor: Davis, Immanuel
Description: Student may contact the instructor or department for information.

**MUSA 3311 Oboe: Music Major**

A-F only, 2-4 credit(s), max credits 24, 12 completions allowed; prereq Audition, dept consent;
Instructor: Snow, John D
Description: Student may contact the instructor or department for information.

**MUSA 3312 Clarinet: Music Major**

A-F only, 2-4 credit(s), max credits 24, 12 completions allowed; prereq Audition, dept consent;
Instructor: Hara, Burt T
Description: Student may contact the instructor or department for information.

**MUSA 3312 Clarinet: Music Major**

A-F only, 2-4 credit(s), max credits 24, 12 completions allowed; prereq Audition, dept consent;
Instructor: Fiterstein, Alexander
Description: Student may contact the instructor or department for information.

**MUSA 3313 Saxophone: Music Major**

A-F only, 2-4 credit(s), max credits 24, 12 completions allowed; prereq Audition, dept consent;
Instructor: Wyatt, Angela J.
Description: Student may contact the instructor or department for information.

**MUSA 3313 Saxophone: Music Major**

A-F only, 2-4 credit(s), max credits 24, 12 completions allowed; prereq Audition, dept consent;
Instructor: Rousseau, Eugene E
Description: Student may contact the instructor or department for information.

**MUSA 3314 Bassoon: Music Major**

A-F only, 2-4 credit(s), max credits 24, 12 completions allowed; prereq Audition, dept consent;
Instructor: Miller Jr., John W
Description: Student may contact the instructor or department for information.

**MUSA 3315 French Horn: Music Major**

A-F only, 2-4 credit(s), max credits 24, 12 completions allowed; prereq Audition, dept consent;
Instructor: Lemen, Caroline May
Description: Student may contact the instructor or department for information.

**MUSA 3315 French Horn: Music Major**

A-F only, 2-4 credit(s), max credits 24, 12 completions allowed; prereq Audition, dept consent;
Instructor: Gast, Michael C
Description: Student may contact the instructor or department for information.

**MUSA 3316 Trumpet: Music Major**

A-F only, 2-4 credit(s), max credits 24, 12 completions allowed; prereq Audition, dept consent;
Instructor: Baldwin, David B
Description: Student may contact the instructor or department for information.

**MUSA 3316 Trumpet: Music Major**

A-F only, 2-4 credit(s), max credits 24, 12 completions allowed; prereq Audition, dept consent;
Instructor: Borden, Gary Alan
Description: Student may contact the instructor or department for information.

**MUSA 3317 Trombone: Music Major**

A-F only, 2-4 credit(s), max credits 24, 12 completions allowed; prereq Audition, dept consent;
Instructor: Tranter, John Harrington
Description: Student may contact the instructor or department for information.

**MUSA 3317 Trombone: Music Major**

A-F only, 2-4 credit(s), max credits 24, 12 completions allowed; prereq Audition, dept consent;
Instructor: Ashworth, Thomas Jackson
Description: Student may contact the instructor or department for information.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Instructor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSA 3318</td>
<td>Euphonium: Music Major</td>
<td>Billmeyer, Dean W</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 3319</td>
<td>Tuba: Music Major</td>
<td>Campbell, Steven C</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 3321</td>
<td>Percussion: Music Major</td>
<td>Hey, Philip C</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 3322</td>
<td>Harp: Music Major</td>
<td>Flegel, James F</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 3323</td>
<td>Guitar: Music Major</td>
<td>Kienzle, Kathy</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 5401</td>
<td>Piano: Music Major Secondary (graduate)</td>
<td>De Haan, John</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 5403</td>
<td>Organ: Music Major Secondary (graduate)</td>
<td>Zawisza, Philip David</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 8301</td>
<td>Piano: Music Major (graduate)</td>
<td>Shaw, Paul Magnus</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 8302</td>
<td>Harpsichord: Music Major (graduate)</td>
<td>Billmeyer, Dean W</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 8303</td>
<td>Organ: Music Major (graduate)</td>
<td>Billmeyer, Dean W</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 8304</td>
<td>Voice: Music Major (graduate)</td>
<td>Zaro-Mullins, Wendy</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 8304</td>
<td>Voice: Music Major (graduate)</td>
<td>De Haan, John</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 8304</td>
<td>Voice: Music Major (graduate)</td>
<td>Zawisza, Philip David</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 8304</td>
<td>Voice: Music Major (graduate)</td>
<td>Zoro-Mullins, Wendy</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 8304</td>
<td>Voice: Music Major (graduate)</td>
<td>Shaw, Paul Magnus</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 8304</td>
<td>Voice: Music Major (graduate)</td>
<td>De Haan, John</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>MUSA 8304</td>
<td>Voice: Music Major (graduate)</td>
<td>Zawisza, Philip David</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
</tbody>
</table>
MUSA 8305 Violin: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Kim, Young-Nam
Description: Student may contact the instructor or department for information.

MUSA 8305 Violin: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: O'Reilly, Sally P
Description: Student may contact the instructor or department for information.

MUSA 8305 Violin: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Bjork, Mark P
Description: Student may contact the instructor or department for information.

MUSA 8306 Viola: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Konkol, Korye Bernard
Description: Student may contact the instructor or department for information.

MUSA 8307 Cello: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Remenikova, Tanya
Description: Student may contact the instructor or department for information.

MUSA 8308 Double Bass: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Brown, Christopher Craig
Description: Student may contact the instructor or department for information.

MUSA 8309 Flute: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Bogorad, Julia A
Description: Student may contact the instructor or department for information.

MUSA 8309 Flute: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Davis, Immanuel
Description: Student may contact the instructor or department for information.

MUSA 8311 Oboe: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Snow, John D
Description: Student may contact the instructor or department for information.

MUSA 8312 Clarinet: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Hara, Burt T
Description: Student may contact the instructor or department for information.

MUSA 8312 Clarinet: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Fisterstein, Alexander
Description: Student may contact the instructor or department for information.

MUSA 8313 Saxophone: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Rousseau, Eugene E
Description: Student may contact the instructor or department for information.

MUSA 8314 Bassoon: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Miller Jr., John W
Description: Student may contact the instructor or department for information.

MUSA 8315 French Horn: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Lemen, Caroline May
Description: Student may contact the instructor or department for information.

MUSA 8316 Trumpet: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Baldwin, David B
Description: Student may contact the instructor or department for information.

MUSA 8316 Trumpet: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Bordner, Gary Alan
Description: Student may contact the instructor or department for information.

MUSA 8317 Trombone: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Ashworth, Thomas Jackson
Description: Student may contact the instructor or department for information.

MUSA 8318 Euphonium: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Tranter, John Harrington
Description: Student may contact the instructor or department for information.

MUSA 8319 Tuba: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Campbell, Steven C
Description: Student may contact the instructor or department for information.

MUSA 8321 Percussion: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Meza, Fernando A.
Description: Student may contact the instructor or department for information.

MUSA 8321 Percussion: Music Major (graduate)
A-F only, 2-4 credit(s), max credits 48, 24 completions allowed; prereq Audition, dept consent;
Instructor: Lemen, Caroline May
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
MUED 3519 Advanced Conducting and Repertoire

Instructor: STAFF
Description: This course is designed to prepare pre-service teachers with materials and strategies to plan and integrate multi-cultural music instruction for elementary school children. Students will need a tuning fork = A, soprano recorder with Baroque-English fingering and one blank VHS videotape. Students will sing, play instruments, sight read and conduct.
Style: 20% Lecture, 40% Discussion, 40% Laboratory.
Grading: 5% final exam, 20% quizzes, 40% in-class presentation, 15% class participation, 20% problem solving.
Exam Format: Essay

MUED 5550 Student Teaching in Instrumental Music
A-F only, 4-8 credit(s), max credits 8, 1 completion allowed; prereq Music ed major, instr consent; Credit will not be granted if the student has already completed MuEd 3550;
Instructor: Sindberg PhD,Laura K
Description: Student may contact the instructor or department for information.

MUED 5650 Student Teaching Seminar
A-F only, 2 credit(s); prereq At least C- in all required [music, music education, professional education] courses
Credit will not be granted if the student has already completed MuEd 3560;
Instructor: Sindberg PhD,Laura K
Description: Student may contact the instructor or department for information.

MUED 1801 Introduction to Music Therapy
A-F only, 2 credit(s);
Instructor: Pitts,Sarah Elizabeth
Description: Student may contact the instructor or department for information.

MUED 3002 General Music II
A-F only, 3 credit(s); prereq 3301 with a grade of at least C-
Instructor: Addo PhD,Akosua O
Description: Welcome to MUED3302, a course designed to prepare you with materials, strategies and an extensive field experience with expert general music teachers to plan and implement instruction for global arts understanding in general music. Taking this course will, through experiential learning, prepare you to integrate international music and culture perspectives while planning and implementing sequential elementary music instruction. To be enrolled in this course, you must have completed MUED 3301 General Music Methods I.
Grading: 20% reflection paper.

MUED 3415 Choral Conducting and Methods I
A-F only, 4 credit(s); prereq MUS 3502, MUS 3512, [music education major or music therapy major or instr consent], successful completion of soph proficiency exam;
Instructor: Hamann,Keitha Lucas
Description: Student may contact the instructor or department for information.

MUED 3419 Advanced Conducting and Repertoire (Choral)
A-F only, 2 credit(s); prereq 3416, MUS 3401, MUS 3502, MUS 3512, music education major [choral];
Instructor: Mehaffey,Matthew Wayne
Description: Student may contact the instructor or department for information.

MUED 3505 Percussion Techniques and Teaching
A-F only, 2 credit(s), max credits 3, 1 completion allowed; prereq Music ed or music therapy major or instr consent;
Instructor: Rappel,Adam A
Description: Student may contact the instructor or department for information.

MUED 3516 Instrumental Methods and Conducting I
A-F only, 4 credit(s); prereq MUS 3502, MUS 3512, music education major, successful completion of soph proficiency exam, dept consent;
Instructor: Sindberg PhD,Laura K
Description: Student may contact the instructor or department for information.

MUED 3519 Advanced Conducting and Repertoire
(Instrumental)
A-F only, 2 credit(s); prereq 3517, MUS 3502, MUS 3512, music education major, dept consent;
Instructor: Luckhardt,Jerry M
Description: Student may contact the instructor or department for information.

MUED 3802 Guitar I for Music Education and Music Therapy Majors: Developing Group Songleading Skills
A-F only, 2 credit(s); prereq [music therapy or music education major], dept consent;
Instructor: Schwartzberg,Edward Todd
Description: Student may contact the instructor or department for information.

MUED 5011 Music in the Elementary Classroom Curriculum
2-3 credit(s), max credits 3, 1 completion allowed; prereq Elem Ed major or dept consent;
Instructor: STAFF
Description: This course is designed to prepare pre-service teachers with materials and strategies to plan and integrate multi-cultural music instruction for elementary school children. Students will need a tuning fork = A, soprano recorder with Baroque-English fingering and one blank VHS videotape. Students will sing, play instruments, sight read and conduct.
Style: 20% Lecture, 40% Discussion, 40% Laboratory.
Grading: 5% final exam, 20% quizzes, 40% in-class presentation, 15% class participation, 20% problem solving.
Exam Format: Essay

Mur 3802 Guitar I for Music Education and Music Therapy Majors: Developing Group Songleading Skills
A-F only, 2 credit(s); prereq [music therapy or music education major], dept consent;
Instructor: Luckhardt,Jerry M
Description: Student may contact the instructor or department for information.
MUED 5669 Psychology of Music  
A-F only, 3 credit(s); prereq Psy 1001 or Psy 3604 or instr consent; 
Instructor: Lipscomb, Scott D.  
Description: Student may contact the instructor or department for information.

MUED 5803 Therapeutic Management in Music Settings  
A-F only, 4 credit(s); prereq [5804, 5805] or instr consent; 
Instructor: Silverman, Michael J  
Description: Student may contact the instructor or department for information.

MUED 5804 Music Therapy Methods and Procedures I  
A-F only, 4 credit(s); prereq 5800 or instr consent; Credit will not be granted if the student has already completed MuEd 3804; 
Instructor: Schwartzberg, Edward Todd  
Description: Student may contact the instructor or department for information.

MUED 5807 Psychiatric Music Therapy  
A-F only, 3-4 credit(s), max credits 4, 1 completion allowed; 
prereq Grad music therapy student or instr consent; 
Instructor: Silverman, Michael J  
Description: Student may contact the instructor or department for information.

MUED 5855 Music Therapy Internship  
S-N only, 0-13 credit(s), max credits 13, 1 completion allowed; 
prereq Music therapy major, instr consent; Credit will not be granted if the student has already completed MuEd 3855; 
Instructor: Silverman, Michael J  
Description: Student may contact the instructor or department for information.

MUED 8115 Assessment in Arts Education  
A-F only, 3 credit(s); prereq Grad student in [music or music education], dept consent; 
Instructor: Hamann, Keitha Lucas  
Description: Student may contact the instructor or department for information.

MUED 8280 Seminar: Current Trends in Music Education  
A-F only, 3 credit(s), max credits 30, 10 completions allowed; 
prereq dept consent; 
Instructor: Addo PhD, Akosua O  
Description: Welcome to a course designed to provide you with a comprehensive survey of the most recent movements in arts education with a specific focus on critical pedagogy and international education. There will be an emphasis on the following issues: Models of learning transformation, Proven critical pedagogy and international education methods in the arts, The Changing Role and Status of the Arts educator, Frameworks for understanding international issues in arts education. A significant part of the class will include discussion, reading and writing extensively to your demonstrate independent inquiry and analytical skills as a research writer and scholar. All class experiences will prepare you to develop skills and knowledge as a research writer and scholar. A significant part of the class will include discussion, reading and writing extensively to your demonstrate independent inquiry and analytical skills. Reading will include conducting library searches for information beyond required textbooks, and articles presented in class. Your writing will serve as a stepping stone toward specific dissertation projects and, in some cases, may lead to national presentations and/or publication. As we begin our journey together it is important to know that our class is based on respect for the right of everyone to participate fully in cultural and artistic life. I therefore encourage active participation and the voices of everyone in a safe and nurturing learning environment. 
Style: 30% Lecture, 50% Discussion, 10% Student Presentation, 10% Web Based.

MUED 8900 Seminar: Music Education Doctoral Seminar  
A-F only, 1 credit(s), max credits 8, 8 completions allowed; 
prereq dept consent; 
Instructor: Lipscomb, Scott D.  
Description: Student may contact the instructor or department for information.

Nanoparticle Science and Engineering  
125 Mechanical Engineering

NPSE 8101 Nanoparticle Science and Engineering Seminar  
S-N only, 1 credit(s); prereq CSE grad student or; 
Instructor: Cui, Tianhong  
Description: Student may contact the instructor or department for information.

Naval Science  
203 Armory

NAV 4401W Leadership and Management I  
A-F only, 3 credit(s); Meets CLE req of Writing Intensive; 
Instructor: STAFF  
Description: Student may contact the instructor or department for information.

Neuroscience  
6-145 Jackson Hall

NSC 5031W Perception  
3 credit(s); prereq Psy 3031 or Psy 3051 or instr consent; 
Meets CLE req of Writing Intensive; 
Instructor: Logge, Gordon Ernest  
Description: Student may contact the instructor or department for information.

NSC 5201 Computational Neuroscience I: Membranes and Channels  
3 credit(s); prereq calculus through differential equations; 
Credit will not be granted if credit has been received for: 
PHSL 5201; 
Instructor: Miller, Robert F  
Description: Student may contact the instructor or department for information.

NSC 5203 Neuroscience of Vision  
A-F only, 3 credit(s); prereq instr consent; 
Instructor: Miller, Robert F  
Description: Student may contact the instructor or department for information.

NSC 5540 Advanced Survey of Biomedical Neuroscience  
A-F only, 2 credit(s); prereq instr consent; intended for members of biomedical community or students with advanced scientific backgrounds; 
Instructor: Branton, W Dale  
Description: Student may contact the instructor or department for information.

NSC 5561 Systems Neuroscience  
A-F only, 4 credit(s); prereq NSc grad student or instr consent; 
Instructor: Honda, Christopher N  
Description: This is an advanced lecture and laboratory course on the principles of organization of neural systems designed for graduate students or advanced undergraduate students in neuroscience or related fields. The objective of this course is to
provide a contemporary understanding of neural systems forming the basis for sensation and movement, as well as sensory-motor and neural-endocrine integration. The course is a team-taught comprehensive survey of sensory, motor, autonomic, limbic, and neuroendocrine systems. A combination of lecture and laboratory instruction will stress the relationships between structure and function in the nervous system.

**Style:** 50% Lecture, 50% Laboratory. 5 hours of discussion of research literature.

**Grading:** 35% laboratory evaluation, 65% other evaluation.

**Exam Format:** multiple choice, essay, laboratory practical

### NSC 8207 Seminar: Psychopharmacology
1-3 credit(s), max credits 12, 12 completions allowed; prereq instr consent; Credit will not be granted if credit has been received for: PHCL 8207;
**Instructor:** Wilcox, George L
**Description:** Student may contact the instructor or department for information.

### NSC 8208 Neuropsychopharmacology
A-F only, 3 credit(s); prereq [5212, 6112, PSY 5021, PSY 5061] or instr consent;
**Instructor:** Roy, Sabita
**Description:** Student may contact the instructor or department for information.

### NSC 8216 Selected Topics in Autonomic and Neuroendocrine Regulation
S-N only, 1 credit(s); prereq instr consent;
**Instructor:** Engeland, William C
**Description:** Student may contact the instructor or department for information.

### NSC 8217 Systems and Computational Neuroscience
S-N only, 2 credit(s); prereq 5561 or instr consent;
**Instructor:** Ghose, Geoffrey M
**Description:** The course will be in journal club format, in which participants present and discuss recent original research papers. All interested students, faculty members, and postdocs are encouraged to attend. The course typically attracts participants from a variety of departments and perspectives. Students enrolled in the course will be expected to lead the discussion of 1 or 2 papers each session. The course meets from 1:00-2:30 in Jackson 6-137 every Tuesday.

### NSC 8222 Central Regulation of Autonomic Function
A-F only, 3 credit(s); prereq 5561;
**Instructor:** Engeland, William C
**Description:** Student may contact the instructor or department for information.

### NSC 8320 Readings in Neurobiology
1-4 credit(s), max credits 4, 4 completions allowed;
**Instructor:** McLoon, Steven
**Description:** Student may contact the instructor or department for information.

### NSC 8320 Readings in Neurobiology
1-4 credit(s), max credits 4, 4 completions allowed;
**Instructor:** Fairbanks, Carolyn Ann
**Description:** Student may contact the instructor or department for information.

### NSC 8320 Readings in Neurobiology
1-4 credit(s), max credits 4, 4 completions allowed;
**Instructor:** McLoon, Steven
**Description:** Student may contact the instructor or department for information.

### NSC 8481 Advanced Neuropsychaceutics
A-F only, 4 credit(s); prereq instr consent; Credit will not be granted if credit has been received for: CMB 8481;
**Instructor:** Fairbanks, Carolyn Ann
**Description:** Student may contact the instructor or department for information.
NSCI 4105 Neurobiology Laboratory I

A-F only, 3 credit(s); prereq 3101, instr consent credit will not be granted if credit received for: 3105, Biol 3105, Biol 4105, Phsl 3105;

Instructor: Dubinsky, Janet M

Description: This course serves as an introduction to the principles, methods, and laboratory exercises for investigating neural mechanisms and examining experimental evidence. This course constitutes a part of the core curriculum for Neuroscience majors and is designed to supplement and reinforce the objectives of NSc 3101 by emphasizing experimental approaches to understanding the brain. The course will provide an introduction to the development and structure of the vertebrate brain and the various experimental techniques available for this study. Topics include: Comparative gross and cell anatomy of invertebrate and vertebrate nervous systems; gross dissection of fish and mammalian brains; use of experimental histochemistry and fluorescent tracers to study brain circuitry, neurons and synaptic connections in the rat brain; small animal surgery and microdissection; use of fluorescent, confocal and dissecting microscopes; use of stereotaxic brain atlas. Students can expect 4 hours of laboratory and 2 hours for preparation and analysis per week. The main theme of the course is to learn by observation. The specific observations you make will be mostly self-directed and guided by a written assignment each week. There will be only a limited number of specific exercises with detailed instructions, the rest will depend on your initiative.

Style: 5% Lecture, 95% Laboratory.

Grading: 50% reports/papers, 20% class participation, 30% other evaluation. Final oral presentation of laboratory project

NSCI 4105 Neurobiology Laboratory I

A-F only, 3 credit(s); prereq 3101, instr consent credit will not be granted if credit received for: 3105, Biol 3105, Biol 4105, Phsl 3105;

Instructor: Branton, W Dale

Description: This course serves as an introduction to the principles, methods, and laboratory exercises for investigating neural mechanisms and examining experimental evidence. This course constitutes a part of the core curriculum for Neuroscience majors and is designed to supplement and reinforce the objectives of NSc 3101 by emphasizing experimental approaches to understanding the brain. The course will provide an introduction to the development and structure of the vertebrate brain and the various experimental techniques available for this study. Topics include: Comparative gross and cell anatomy of invertebrate and vertebrate nervous systems; gross dissection of fish and mammalian brains; use of experimental histochemistry and fluorescent tracers to study brain circuitry, neurons and synaptic connections in the rat brain; small animal surgery and microdissection; use of fluorescent, confocal and dissecting microscopes; use of stereotaxic brain atlas. Students can expect 4 hours of laboratory and 2 hours for preparation and analysis per week. The main theme of the course is to learn by observation. The specific observations you make will be mostly self-directed and guided by a written assignment each week. There will be only a limited number of specific exercises with detailed instructions, the rest will depend on your initiative.

Style: 5% Lecture, 95% Laboratory.

Grading: 50% reports/papers, 20% class participation, 30% other evaluation. Final oral presentation of laboratory project

NSCI 4793W Directed Studies: Writing Intensive

S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent; no more than 7 cr of [4793, 4794, 4993, 4994] may count toward major requirements; Meets CLE req of Writing Intensive;

Instructor: STAFF

Description: Individual study of selected topics with emphasis on readings and use of scientific literature. This course is writing intensive. Students will have the opportunity to write a review article on a topic in their discipline of interest. They will learn to survey the current literature in a specific area of research, organize the data available relevant to the research topic, and effectively communicate this information in their paper. Also, students will draw conclusions from their investigations of the research topic and suggest directions for future research.

Students are required to write a 10-15 page paper in the format of a scientific review article. An extensive survey of the literature will be required in order to present the most current information in the selected research area. This course is graded pass/fail, and the final grade is based on successful completion of the review article.

Grading: 100% reports/papers.

NSCI 4794W Directed Research: Writing Intensive

S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent; no more than 7 cr of [4793, 4794, 4993, 4994] may count toward major requirements; Meets CLE req of Writing Intensive;

Instructor: STAFF

Description: This course consists of laboratory or field investigation of selected areas of research, done under the direction of a faculty mentor. The course is writing intensive. Students will have the opportunity to present the results of their research in the format of a scientific article. They will learn to survey the current literature in their area of research, organize data, use statistical analyses if appropriate, and effectively communicate the results of their experiments through construction of tables, graphs, and other figures. Also, students will draw conclusions from their data and use persuasive arguments to convince readers of their interpretations of the data. Students will be required to write a 10-15 page paper in the format of a scientific article. This course is graded pass/fail, and the final grade is based on successful completion of the article.

Grading: 100% reports/papers.

NSCI 4993 Directed Studies

S-N only, 1-7 credit(s), max credits 7, 7 completions allowed; prereq instr consent, dept consent; max of 7 cr of 4993 and/or 4994 may count toward major requirements;

Instructor: STAFF

Description: Independent study of selected topics with emphasis on preparing and organizing information for a professional audience. Students are required to write a 10-15 page paper in the format of a scientific review article. An extensive survey of the literature will be required in order to present the most current information in the selected research area. This course is graded pass/fail, and the final grade is based on successful completion of the article.

Grading: 100% reports/papers.

NSCI 4994 Directed Research

S-N only, 1-7 credit(s), max credits 7, 7 completions allowed; prereq instr consent, dept consent; max of 7 cr of 4993 and/or 4994 may count toward major requirements;

Instructor: STAFF

Description: Individual study of selected topics with emphasis on preparing and organizing information for a professional audience. Students are required to write a 10-15 page paper in the format of a scientific review article. An extensive survey of the literature will be required in order to present the most current information in the selected research area. This course is graded pass/fail, and the final grade is based on successful completion of the article.

Grading: 100% reports/papers.
Norwegian

192 Klaeber Court

NOR 1001 Beginning Norwegian
5 credit(s); Credit will not be granted if credit has been received for: NOR 4001;
Instructor: STAFF
Description: This is the first course in the first-year language instruction sequence (1001-2), designed to develop a basic communicative proficiency in Norwegian. Students will practice the four language skills (speaking, writing, reading, and listening) and learn to handle simple, everyday transactions. Class sessions will emphasize interactive communicative activities in pairs and small groups, with a focus on improving listening and speaking skills. Additional class time will be spent on reading, writing, and grammar. Students are expected to practice these skills outside of class as well. Learning about life and culture in Norway is an integral part of the course. See description for Nor 4001 for an option for qualified students to register for this course for 2 credits (and lower tuition) instead of 4 credits.
Style: 10% Lecture, 70% Discussion, 20% Laboratory.
Grading: 50% reports/papers, 50% other evaluation. oral/aural
Exam Format: structured exercises in all 4 modalities and grammar, pronunciation, vocabulary and culture

NOR 1003 Intermediate Norwegian
5 credit(s); prereq 1002; Credit will not be granted if credit has been received for: NOR 4003;
Instructor: STAFF
Description: This course continues the presentation of Norwegian language skills begun in 1001-2 (or quarter courses 1101-2-3). At this level, students will be reading and listening to more advanced authentic Norwegian material and will expand and refine vocabulary and knowledge of grammar. The 1003-4 course sequence will prepare students for the Graduation Proficiency Test (GPT) that will be taken toward the end of 1004. Students will practice the four language skills (speaking, writing, reading, and listening). Class sessions will emphasize interactive communicative activities in pairs and small groups; additional class time will be spent on reading, writing, and grammar. Students are expected to practice these skills outside of class as well. Learning about life and culture in Norway is an integral part of the course. See the description for Nor 4003 for an option for qualified students to register for this course for 2 credits (and lower tuition) instead of 4 credits.
Style: 10% Lecture, 70% Discussion, 20% Laboratory.
Grading: 50% reports/papers, 50% other evaluation. oral/aural
Exam Format: written essays, listening and reading protocols, structural exercises, oral interviews

NOR 4001 Beginning Norwegian
2 credit(s); prereq 1004 in another language or passing score on LPE or grad student; Credit will not be granted if credit has been received for: NOR 1001;
Instructor: STAFF
Description: See the course description for Nor 1001. This 4xxx-level course designator is a special option for qualified students to take the 1xxx-level course for reduced credits. If you have already passed the Graduation Proficiency Test (GPT) in another language or are a graduate student or are not seeking a CLA degree, you may register for Nor 1001 under the number Nor 4001 for 2 credits. Contact the department office, (612) 625-2080, for permission.

NOR 4003 Intermediate Norwegian
2 credit(s); prereq 1004 in another language or passing score on LPE or grad student; Credit will not be granted if credit has been received for: NOR 1003;
Instructor: STAFF
Description: See the course description for Nor 1003. This 4xxx-level course designator is a special option for qualified students to take the 1xxx-level course for reduced credits. If you have already passed the Graduation Proficiency Test (GPT) in another language or are a graduate student or are not seeking a CLA degree, you may register for Nor 1003 under the number Nor 4003 for 2 credits. Contact the department office, (612) 625-2080, for permission.

Nursing

6-101 Weaver-Densford Hall

NURS 1020 Challenge of Nursing
S-N only, 1 credit(s);
Instructor: Rowan, Mary M.
Description: Student may contact the instructor or department for information.

NURS 1030 Profession of Nursing Seminar
A-F only, 1 credit(s); prereq Nursing fr guarantee student, instr consent;
Instructor: Alaniz, PhD, Karin Lue
Description: Student may contact the instructor or department for information.

NURS 2001 Human Growth and Development: A Life Span Approach
3 credit(s);
Instructor: Alaniz, PhD, Karin Lue
Description: Theoretical, personal and culturally determined views of human life span development are examined from the prenatal period through the dying experience. Grand and emergent theories are applied to the biosocial, cognitive and psychosocial domains of life span development.
Style: 90% Lecture, 5% Film/Video, 5% Small Group Activities.
Grading: 20% papers/reports, 60% quizzes, 20% attendance.

NURS 3115 Health Informatics and Information Technology
A-F only, 3 credit(s); prereq Undergrad or instr consent; Meets CLE req of Technology and Society;
Instructor: Kerr, Madeleine June
Description: Student may contact the instructor or department for information.

NURS 3690 Life Span, Growth, and Development I
2 credit(s); prereq One general psychology and one general biology course or instr consent;
Instructor: Davis, PhD, Joan Audray
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policies, including fee and financial aid restrictions. This course uses a life span perspective to explore changes and transitions and changes from conception through early adulthood. It provides students with a broad background in human growth and development across the life span. Nurses and other health care professionals need to understand normal development in order to effectively help people deal with health problems. This course provides a good foundation for further study in a specialty area, and many students will choose to take additional courses that deal with specific developmental periods. The course will appeal to a broad range of students who are interested in learning about the biosocial, cognitive, and psychosocial forces that shape human lives.
Style: This is a printed correspondence section.
Grading: written assignments = 80 points midcourse exam = 60 points final exam = 60 points
Exam Format: Supervised, in-person exams.
NURS 3691 Life Span, Growth, and Development I  
1 credit(s); prereq 3690, one general psychology and one general biology course or instr consent;  
Instructor: Davis PhD,Joan Audray  
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of a student group. Visit “Class URL” for ODL policies, including fee and financial aid restrictions. In this course we use a life span perspective to explore transitions and changes in middle and late adult development. The course provides students with a broad background in human growth and development across the life span. Nurses and other health care professionals need to understand normal development in order to effectively help people deal with health problems. This course provides a good foundation for further study in a specialty area, and many students will choose to take additional courses that deal with specific developmental periods. This course will appeal to a broad range of students who are interested in learning about the biosocial, cognitive, and psychosocial forces that shape human lives.  
Style: This is a printed correspondence section.  
Grading: 60% final exam, 40% written homework. If you register for the S/N grade option, your average must be at least 70% to receive an S (satisfactory). We encourage prenursing and nursing students to take the course A-F if they want to have the course count in their accumulated GPA.  
Exam Format: Supervised, in-person (not online) exam.  

NURS 3703 Assessment and Beginning Interventions: Nursing Lab 1  
A-F only, 2 credit(s); prereq Enrolled School of Nursing, at least soph semester I;  
Instructor: Rowan, Mary M.  
Description: Student may contact the instructor or department for information.  

NURS 3703 Assessment and Beginning Interventions: Nursing Lab 1  
A-F only, 2 credit(s); prereq Enrolled School of Nursing, at least soph semester I;  
Instructor: Flaten, Carol  
Description: Student may contact the instructor or department for information.  

NURS 3703 Assessment and Beginning Interventions: Nursing Lab 1  
A-F only, 2 credit(s); prereq Enrolled School of Nursing, at least soph semester I;  
Instructor: Rhudy, Lori M  
Description: Student may contact the instructor or department for information.  

NURS 3801 Patient Centered Care of Adults/Older Adults I  
A-F only, 4 credit(s); prereq Admitted to Nurs BSN program;  
Instructor: Rhudy, Lori M  
Description: Student may contact the instructor or department for information.  

NURS 3802 Nursing Care of Families I  
A-F only, 4 credit(s); prereq Enrolled in School of Nursing;  
Instructor: Larson, Karin J  
Description: Student may contact the instructor or department for information.  

NURS 3806 Nurse as Professional  
A-F only, 2 credit(s); prereq Admitted to nursing BSN program;  
Instructor: Herrick, Linda Marie  
Description: Student may contact the instructor or department for information.  

NURS 4320 Psychiatric and Mental Health Nursing  
A-F only, 5 credit(s);  
Instructor: Darst, Elaine  
Description: Prerequisite: Nursing Student Develop skill in assessment of biopsychosocial needs, develop a holistic plan of care, help client negotiate care, and evaluate client outcomes. Students will establish therapeutic relationships with clients experiencing psychiatric illnesses using self as a therapeutic tool in promoting mental health. Prerequisites: Enrolled as Nursing Student in the School of Nursing.  
Style: 50% Lecture, 2% Film/Video, 2% Discussion, 40% Laboratory, 2% Demonstration, 3% Guest Speakers, 1% Web Based.  
Grading: 20% mid exam, 20% final exam, 40% reports/papers, 15% additional semester exams, 5% class participation. A passing grade on clinical evaluations is required to pass the course.  
Exam Format: Multiple choice  

NURS 4322 Population-based Public Health Nursing  
A-F only, 5 credit(s); prereq Nursing or instr consent;  
Instructor: Flaten, Carol  
Description: Student may contact the instructor or department for information.  

NURS 4403 Nursing Care of Childbearing Families  
A-F only, 4 credit(s); prereq 4201, 4203;  
Instructor: Larson, Karin J  
Description: Student may contact the instructor or department for information.  

NURS 4408 Nursing Care of Infants, Children, and Adolescents  
A-F only, 4 credit(s); prereq 4201, 4203;  
Instructor: Flaten, Jeanne  
Description: Student may contact the instructor or department for information.  

NURS 4430 Immunization Tour  
S-N only, 1 credit(s); prereq 4202, level ll nursing student, instr consent; Credit will not be granted if credit has been received for: PHAR 6210;  
Instructor: Pfeiffer, Jeanne  
Description: Student may contact the instructor or department for information.  

NURS 4800 Nursing Topics  
0-16 credit(s), max credits 48, 3 completions allowed; prereq instr consent ;  
Instructor: Dean EdD, Patrick Joseph  
Description: Student may contact the instructor or department for information.  

NURS 5016 Critical Reading of Scientific Literature in Adolescent Health  
1 credit(s); prereq [Grad-level research methods course, inferential statistics course or instr consent;  
Instructor: Sieving, Renee Evangeline  
Description: Student may contact the instructor or department for information.  

NURS 5030 Clinical Foundations  
A-F only, 7 credit(s), max credits 21, 3 completions allowed; prereq Admission to postbaccalaureate certificate nursing program;  
Instructor: Treat-Jacobson PhD, Diane Jeanette  
Description: Student may contact the instructor or department for information.  

NURS 5034 Clinical Seminar: Nursing Care of Clients With Complex Health Conditions  
A-F only, 2 credit(s); prereq 5033, 8100, Nursing Postbaccalaureate Certificate Prog;
NURS 5035 Practical Nursing Care for Complex Health Conditions
A-F only, 4 credit(s); prereq Nursing postbaccalaureate certificate program or master of nursing program;
Instructor: Pung, Laurie Jean
Description: Student may contact the instructor or department for information.

NURS 5035 Practical Nursing Care for Complex Health Conditions
A-F only, 4 credit(s); prereq Nursing postbaccalaureate certificate program or master of nursing program;
Instructor: Ringdahl, Deborah Rene
Description: Student may contact the instructor or department for information.

NURS 5035 Practical Nursing Care for Complex Health Conditions
A-F only, 4 credit(s); prereq Nursing postbaccalaureate certificate program or master of nursing program;
Instructor: Friedrich, Cherri L
Description: Student may contact the instructor or department for information.

NURS 5035 Practical Nursing Care for Complex Health Conditions
A-F only, 4 credit(s); prereq Nursing postbaccalaureate certificate program or master of nursing program;
Instructor: Steffes, Mary Teresa
Description: Student may contact the instructor or department for information.

NURS 5040H Seeking Solutions to Global Health Issues
A-F only, 3 credit(s); prereq Grad student or upper div honors or instr consent ; Meets CLE req of Global Perspectives;
Instructor: Martin, Lisa
Description: Student may contact the instructor or department for information.

NURS 5115 Interprofessional Health Care Informatics
A-F only, 3 credit(s);
Instructor: Kerr, Madeleine June
Description: Student may contact the instructor or department for information.

NURS 5115 Interprofessional Health Care Informatics
A-F only, 3 credit(s);
Instructor: Clancy, Thomas R
Description: Student may contact the instructor or department for information.

NURS 5116 Consumer Health Informatics
A-F only, 1 credit(s); prereq Grad student or instr consent ;
Instructor: Westra, Bonnie L
Description: Student may contact the instructor or department for information.

NURS 5117 Consumer Health Informatics Practicum
S-N only, 1 credit(s); prereq [Grad student, [5116 or Concurrent registration is required (or allowed) in 5116]] or instr consent ;
Instructor: Westra, Bonnie L.
Description: Student may contact the instructor or department for information.

NURS 5190 Essentials of Holistic Health Assessment
A-F only, 3 credit(s); prereq Admission to MN Program;
Instructor: Short, Gwen
Description: Student may contact the instructor or department for information.

NURS 5222 Advanced Physiology
3 credit(s);
Instructor: Anderson PhD, Lisa Carney
Description: Student may contact the instructor or department for information.

NURS 5228 Pharmacology for Advanced Practice Nursing
A-F only, 2 credit(s); prereq Grad nursing student or instr consent ;
Instructor: Lichtblau PhD, Leonard
Description: Student may contact the instructor or department for information.

NURS 5241 Nursing Leadership for Effective Practice
A-F only, 3 credit(s); prereq Final sem of MN Program;
Instructor: Friedrich, Cherri L
Description: Student may contact the instructor or department for information.

NURS 5800 Nursing Topics
1-4 credit(s), max credits 8, 4 completions allowed; prereq instr consent ;
Instructor: Halcon PhD, Linda Luciente
Description: Student may contact the instructor or department for information.

NURS 5995 Research Dissemination
2 credit(s); prereq Doctoral student or instr consent ;
Instructor: Henly, Susan J
Description: Student may contact the instructor or department for information.

NURS 6100 Evidence-based Practice
A-F only, 3 credit(s); prereq Admission to DNP Program;
Instructor: Hadidi, Niloofar Niakosari
Description: Student may contact the instructor or department for information.

NURS 6100 Evidence-based Practice
A-F only, 3 credit(s); prereq Admission to DNP Program;
Instructor: Rhudy, Lori M
Description: Student may contact the instructor or department for information.

NURS 6305 Women’s Reproductive Healthcare
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed; prereq 5200, 5222, 5228, 5229, DNP student;
Instructor: Schadewald, Diane Marie
Description: Student may contact the instructor or department for information.

NURS 6306 Women’s Reproductive Healthcare Practicum
S-N only, 1-6 credit(s), max credits 6, 4 completions allowed; prereq 5200, 5222, 5228, 5229, [6305 or Concurrent registration is required (or allowed) in 6305], DNP student;
Instructor: Ringdahl, Deborah Rene
Description: Student may contact the instructor or department for information.

NURS 6501 Assessment and Management of Health for Advanced Practice Nurses, I
A-F only, 3 credit(s); prereq DNP student or instr consent;
Instructor: Schadewald, Diane Marie
Description: Student may contact the instructor or department for information.

NURS 6604 Foundations for Integrative Mental Health and Psychiatric Advanced Nursing Practice
3 credit(s); prereq 5200, 5222, 5224, 5228, CSH 5101;
Instructor: Kaas, Merrie Jean
Description: Student may contact the instructor or department for information.

NURS 6702 Executive Leadership Seminar
S-N only, 3 credit(s); prereq Grad student or instr consent ;
NURS 7000 DNP Proseminar
1 credit(s); prereq Admission to Post-BSN Doctorate of Nursing Practice Program;
Instructor: Pung, Laurie Jean
Description: Student may contact the instructor or department for information.

NURS 7001 DNP Postbaccalaureate Seminar I
S-N only, 3 credit(s); prereq 7000, admission to postbaccalaureate DNP;
Instructor: Schadewald, Diane Marie
Description: Student may contact the instructor or department for information.

NURS 7100 DNP Seminar I
S-N only, 4 credit(s); prereq Admission to DNP program;
Instructor: Chesney PhD, Mary L
Description: Student may contact the instructor or department for information.

NURS 7108 Population Health Informatics
A-F only, 2 credit(s); prereq [5115 or [HINF 5430, HINF 5431]] or instr consent;
Instructor: Monsen PhD, Karen A
Description: Student may contact the instructor or department for information.

NURS 7109 Population Health Informatics Practicum
S-N only, 2 credit(s); prereq [5115, [7108 or Concurrent registration is required (or allowed) in 7108] or [HINF 5430, HINF 5431]] or instr consent;
Instructor: Monsen PhD, Karen A
Description: Student may contact the instructor or department for information.

NURS 7300 Program Evaluation
A-F only, 3 credit(s); prereq Admission to DNP program or instr consent;
Instructor: Dean EdD, Patrick Joseph
Description: Student may contact the instructor or department for information.

NURS 7300 Program Evaluation
A-F only, 3 credit(s); prereq Admission to DNP program or instr consent;
Instructor: Findorff, Mary Jocelyn
Description: Student may contact the instructor or department for information.

NURS 7504 Assessment and Management of Health for Advanced Practice Nurses, Practicum I
S-N only, 1-2 credit(s), max credits 2, 1 completion allowed; prereq 5200, 5222, 5224, 5229, 6501;
Instructor: Juve, Catherine
Description: Student may contact the instructor or department for information.

NUTR 5624 Nutrition and Genetics
A-F only, 2 credit(s); prereq Biochemistry;
Instructor: Peterson, Sabrina
Description: Student may contact the instructor or department for information.

NUTR 5625 Nutritional Biochemistry
A-F only, 3 credit(s); prereq BIOC 3021 or instr consent;
Instructor: Chen, Chi
Description: Student may contact the instructor or department for information.

NUTR 8620 Advances in Nutrition
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Description</th>
<th>Style</th>
<th>Exam Format</th>
<th>Grading</th>
<th>Prerequisites</th>
<th>Enrolled OT student</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>OT 6102</td>
<td>Professional Identity: Behaviors and Attitudes</td>
<td>Schaber PhD, Patricia Louise</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>S/N</td>
<td>Registered OT student</td>
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<tr>
<td>OT 6100</td>
<td>Public and Professional Engagement I</td>
<td>Martin PhD, Peggy Mae</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
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<td>Registered OT student</td>
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<tr>
<td>OT 6101</td>
<td>Foundations of Occupational Science and Occupational Therapy</td>
<td>Schaber PhD, Patricia Louise</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>A-F</td>
<td>Registered OT student</td>
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<tr>
<td>OT 6102</td>
<td>Professional Identity: Behaviors and Attitudes</td>
<td>Schaber PhD, Patricia Louise</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>S/N</td>
<td>Registered OT student</td>
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<tr>
<td>OT 6103</td>
<td>Occupational Therapy Process for Society</td>
<td>Martin PhD, Peggy Mae</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>S/N</td>
<td>Registered OT student</td>
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<tr>
<td>OT 6111</td>
<td>Foundations: Occupations as Therapy</td>
<td>Hutson, Jennifer Ann</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>A-F</td>
<td>Registered OT student</td>
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<tr>
<td>OT 6113</td>
<td>Occupational Therapy Process for Community</td>
<td>Jones, Terrianne Thelen</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>A-F</td>
<td>Registered OT student</td>
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<tr>
<td>OT 6200</td>
<td>Public and Professional Engagement II</td>
<td>McGee, Corey Weston</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>S/N</td>
<td>Registered OT student</td>
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<td>OT 6200</td>
<td>Public and Professional Engagement II</td>
<td>McGee, Corey Weston</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>S/N</td>
<td>Registered OT student</td>
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<tr>
<td>OT 6402</td>
<td>Occupational Therapy Process for Individuals: Occupation Through Neurorehabilitative Approaches</td>
<td>Jacobs, C</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>A-F</td>
<td>Registered OT student</td>
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<td>OT 6403</td>
<td>Management of Occupational Therapy Services</td>
<td>Quake-Rapp PhD, Cindee</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>A-F</td>
<td>Registered OT student</td>
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<td>OT 6412</td>
<td>Occupational Therapy Process for Individuals: Orthotics and Prosthetics</td>
<td>McGee, Corey Weston</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>A-F</td>
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<td>OT 6422</td>
<td>Occupational Therapy Process: Group Context</td>
<td>Jacobs, C</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>A-F</td>
<td>Registered OT student</td>
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<td>OT 6432</td>
<td>Occupational Therapy Process for Individuals: Educational Context</td>
<td>Jacobs, C</td>
<td>Study may contact the instructor or department for information.</td>
<td>Online</td>
<td>Final take-home essay</td>
<td>54% final exam, 16% quizzes, 30% written homework</td>
<td>A-F</td>
<td>Registered OT student</td>
<td></td>
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</tbody>
</table>
OT 7101 Foundations of Occupational Science and Occupational Therapy  
A-F only, 4 credit(s); prereq Grad student, instr consent;  
Instructor: Mathiowetz PhD, Virgil G  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OT 7201 Scholarly Inquiry in Health Sciences  
A-F only, 4 credit(s); prereq OT student or instr consent;  
Instructor: Schaber PhD, Patricia Louise  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OT 7494 Scholarly Project in OT II  
S-N only, 4 credit(s); prereq Registered OT student or instr consent;  
Instructor: Holliday, David Wallace  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OT 7596 Occupational Therapy Level II Fieldwork I  
S-N only, 6 credit(s); prereq Registered OT student or instr consent;  
Instructor: Jones, Terrianne Thielen  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OT 7696 Occupational Therapy Level II Fieldwork II  
S-N only, 6 credit(s); prereq Registered OT student or instr consent;  
Instructor: Jones, Terrianne Thielen  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OT 7796 Occupational Therapy Level II Fieldwork III: Optional  
S-N only, 1-6 credit(s), max credits 6, 1 completion allowed; prereq Registered OT student or instr consent;  
Instructor: Jones, Terrianne Thielen  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OCS 3500 Domestic Off-Campus  
S-N only, 1-15 credit(s), max credits 15, 1 completion allowed; prereq dept consent;  
Instructor: Holliday, David Wallace  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OCS 3550 National Student Exchange: Off-Campus Study  
S-N only, 0 credit(s); prereq dept consent;  
Instructor: STAFF  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OCS 520 Off-Campus Study  
S-N only, 0 credit(s); prereq dept consent;  
Instructor: Holliday, David Wallace  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OCS 550 National Student Exchange: Off-Campus Study  
S-N only, 0 credit(s), 3 completions allowed; prereq dept consent;  
Instructor: STAFF  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OJIB 1101 Beginning Ojibwe I  
5 credit(s); Credit will not be granted if credit has been received for: OJIB 4101;  
Instructor: Jones, Dennis  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OJIB 3103 Intermediate Ojibwe I  
5 credit(s); prereq 1101, 1102; Credit will not be granted if credit has been received for: OJIB 4103;  
Instructor: Jones, Dennis  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OJIB 4101 Beginning Ojibwe I  
3 credit(s); prereq 1004 in another language or passing score on LPE or grad student; Credit will not be granted if credit has been received for: OJIB 1101;  
Instructor: Jones, Dennis  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OJIB 4103 Intermediate Ojibwe I  
3 credit(s); prereq 1101, 3103; Credit will not be granted if credit has been received for: OJIB 3103;  
Instructor: Jones, Dennis  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

OJIB 5106 Advanced Ojibwe Language I  
A-F only, 3 credit(s), max credits 12, 4 completions allowed;  
Instructor: Fairbanks, Brendan George  
Description: This course registration allows students to study in a different part of the United States for up to a year through National Student Exchange. There are more than 170 National Student Exchange (NSE) institutions in Hawaii, Florida, and 48 other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

Operations and Management Sciences  
3-140 Carlson School of Management  

OMS 2550 Business Statistics: Data Sources, Presentation, other states and regions, including Puerto Rico, Guam, the Virgin Islands, and Canada. The application deadline for participation in the following academic year is mid-February. Prerequisite: application and acceptance into the National Student Exchange program in the Career and Community Learning Center.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
OBIO 8001 Methods in Research and Writing
2 credit(s);
Instructor: Rudney, Joel David
Description: Student may contact the instructor or department for information.

OBIO 8021 Oral Microbiology
2 credit(s); prereq Dental specialist or oral research trainee or instr consent;
Instructor: Rudney, Joel David
Description: Student may contact the instructor or department for information.

OBIO 8030 Oral Biology Seminar
S-N only, 1 credit(s), max credits 10, 10 completions allowed; prereq Dental specialist or oral research trainee or instr consent;
Instructor: Herzberg, Mark C
Description: Student may contact the instructor or department for information.

OBIO 8093 Tutorial in Oral Biology
S-N only, 1-2 credit(s), max credits 2, 1 completion allowed; prereq instr consent;
Instructor: Herzberg, Mark C
Description: Student may contact the instructor or department for information.

OSUR 5257 Ambulatory General Anesthesia for the Oral and Maxillofacial Surgeon
S-N only, 0-6 credit(s), max credits 6, 1 completion allowed; prereq Participation in oral and maxillofacial surgery training program;
Instructor: Hughes, Pamela Jean
Description: Student may contact the instructor or department for information.

OSUR 5276 Medicine Rotation for the Oral and Maxillofacial Surgeon
S-N only, 0-6 credit(s), max credits 6, 1 completion allowed; prereq Participation in oral and maxillofacial surgery training program;
Instructor: Hughes, Pamela Jean
Description: Student may contact the instructor or department for information.

OSUR 8250 Oral and Maxillofacial Surgery Rotation for the Oral and Maxillofacial Surgeon
S-N only, 0-6 credit(s), max credits 6, 1 completion allowed; prereq Participation in oral and maxillofacial surgery training program;
Instructor: Hughes, Pamela Jean
Description: Student may contact the instructor or department for information.

OSUR 8253 Case Presentations and Chief Conferences
S-N only, 0-6 credit(s), max credits 6, 1 completion allowed; prereq Participation in oral and maxillofacial surgery training program;
Instructor: Hughes, Pamela Jean
Description: Student may contact the instructor or department for information.

OSUR 8255 General Surgery Rotation for the Oral and Maxillofacial Surgeon
S-N only, 0-6 credit(s), max credits 6, 1 completion allowed; prereq Participation in oral and maxillofacial surgery training program;
Instructor: Hughes, Pamela Jean
Description: Student may contact the instructor or department for information.

OSUR 8256 Contemporary Anesthesia Literature Review
S-N only, 0-6 credit(s), max credits 6, 1 completion allowed; prereq Participation in oral and maxillofacial surgery training program;
Instructor: Hughes, Pamela Jean
Description: Student may contact the instructor or department for information.
OSUR 8260 Surgical Rounds for the Oral and Maxillofacial Surgeon
S-N only, 0-6 credit(s), max credits 6, 1 completion allowed;
prereq Participation in oral and maxillofacial surgery training program;
Instructor: Hughes, Pamela Jean
Description: Student may contact the instructor or department for information.

OSUR 8267 Anesthesia Rotation for the Oral and Maxillofacial Surgeon
S-N only, 0-6 credit(s), max credits 6, 1 completion allowed;
prereq Participation in oral and maxillofacial surgery training program;
Instructor: Hughes, Pamela Jean
Description: Student may contact the instructor or department for information.

Orthodontics
15-209 MoosT

OTHO 7102 Growth & Development
A-F only, 0-5 credit(s), max credits 5, 1 completion allowed;
Instructor: Beyer, John Paul
Description: Student may contact the instructor or department for information.

OTHO 7112 Diagnosis & Treatment Planning
A-F only, 0-5 credit(s), max credits 5, 1 completion allowed;
prereq Admission to graduate orthodontic program.;
Instructor: Vayda, Patricia Macchiarul
Description: Student may contact the instructor or department for information.

OTHO 7202 Clinical Orthodontics
A-F only, 0-5 credit(s), max credits 5, 1 completion allowed;
prereq Admission to graduate orthodontic program.;
Instructor: Speidel, T Michael
Description: Student may contact the instructor or department for information.

OTHO 8122 Orthodontic Seminar
A-F only, 0-5 credit(s), max credits 5, 1 completion allowed;
prereq Orthodontic grad student;
Instructor: Pliska DDS, MS, B. Benjamin T
Description: Student may contact the instructor or department for information.

OTHO 8132 Topics in Orthodontics
A-F only, 0-5 credit(s), max credits 5, 1 completion allowed;
prereq Orthodontic grad student;
Instructor: Ekim, Lilah Suzan
Description: Student may contact the instructor or department for information.

OTHO 8142 Research in Orthodontics
A-F only, 0-5 credit(s), max credits 5, 1 completion allowed;
prereq Orthodontic grad student;
Instructor: Beyer, John Paul
Description: Student may contact the instructor or department for information.

Pediatric Dentistry
6-150 MoosT

PDEN 7000 Directed Research in Pediatric Dentistry
S-N only, 1 credit(s);
Instructor: Grothe, Ronald
Description: Student may contact the instructor or department for information.

PDEN 7100 Advanced Clinical Pediatric Dentistry
A-F only, 1-5 credit(s), max credits 5, 1 completion allowed;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

PDEN 7200 Advanced Pediatric Dentistry Techniques
S-N only, 0.5 credit(s);
Instructor: STAFF
Description: Student may contact the instructor or department for information.

PDEN 8010 Pediatric Dentistry Diagnosis and Treatment Planning
A-F only, 1 credit(s), max credits 5, 5 completions allowed;
Instructor: Grothe, Ronald
Description: Student may contact the instructor or department for information.

PDEN 8100 Hospital Pediatric Dentistry
S-N only, 1 credit(s);
Instructor: Grothe, Ronald
Description: Student may contact the instructor or department for information.

PDEN 8110 Pediatric Dentistry Outreach Experiences
S-N only, 1 credit(s), max credits 3, 3 completions allowed;
Instructor: Grothe, Ronald
Description: Student may contact the instructor or department for information.

Pediatrics
13-118 PWB (Box 391 UMHC)

PED 7091 Independent Study in the Neural Basis of Anger, Tantrums, and Aggression
A-F only, 2 credit(s); prereq instr consent ;
Instructor: Potegal, Michael
Description: Student may contact the instructor or department for information.

Otolaryngology
8-240 PWB (Mayo Mail Code 396)

OTOL 8248 Directed Readings in Auditory Physiology
1-2 credit(s), max credits 2, 1 completion allowed; prereq instr consent ; Credit will not be granted if credit has been received for: NSC 8248;
Pharmaceutics
9-177 Weaver-Densford Hall

PHM 8100 Seminar: Pharmaceutics
S-N only, 1 credit(s), max credits 4, 4 completions allowed; prereq Grad Phm major;
Instructor: Suryanarayanan,Raj
Description: Student may contact the instructor or department for information.

PHM 8110 Readings in Pharmaceutics
S-N only, 1 credit(s), max credits 4, 4 completions allowed; prereq Grad Phm major;
Instructor: Suryanarayanan,Raj
Description: Student may contact the instructor or department for information.

PHM 8120 Readings in Central Nervous System (CNS) Drug Delivery
S-N only, 1 credit(s), max credits 4, 4 completions allowed; prereq instn consent;
Instructor: Fairbanks,Carolyn Ann
Description: Student may contact the instructor or department for information.

PHM 8150 Pharmacokinetics Research Seminar
S-N only, 1 credit(s), max credits 12, 12 completions allowed; prereq Grad Phm major; Credit will not be granted if credit has been received for: PHAR 6223;
Instructor: Elmquist,William Frederick
Description: Student may contact the instructor or department for information.

PHM 8441 Solubility and Solid-State Properties of Drugs
A-F only, 3 credit(s); prereq Physical chem survey course or instn consent;
Instructor: Suryanarayanan,Raj
Description: Student may contact the instructor or department for information.

Pharmacology
6-120 Jackson Hall

PHCL 4001 Mechanisms of Drug Action
A-F only, 2 credit(s); prereq Upper div or instn consent; [prev or concurrent] courses in [biology, biochemistry] recommended;
Instructor: Connell,Gregory James
Description: This introductory course is highly appropriate for those students interested in health sciences research, medicine, or the pharmaceutical industry. In our modern society, drug-based strategies are the predominant and often the most effective way to treat disease. This course presents many of the fundamental concepts that define the discipline of Pharmacology by focusing on the derivation of a drug-based strategy to treat a single medical condition. This semester's course will be centered on the development of novel anti-cancer drugs and is designed to be interactive, with both written and oral components. Additional Info: Please contact course directors directly or visit the website: Class URL: http://www.pharmacology.med.umn.edu/PHCL4001.html

PHCL 5109 Problems in Pharmacology
1-18 credit(s), max credits 18, 1 completion allowed; prereq Upper div or grad student or instn consent;
Instructor: Loh,Horace H
Description: Research projects and special problems by arrangement.

PHCL 5110 Introduction to Pharmacology
A-F only, 3 credit(s); prereq Grad student or instr consent;
Instructor: Campbell,Colin R
Description: Student may contact the instructor or department for information.

PHCL 5211 Pharmacology
A-F only, 2 credit(s); prereq 5210 or instr consent;
Instructor: Thayer,Stanley A
Description: Student may contact the instructor or department for information.

PHCL 8200 Seminar: Selected Topics in Pharmacology
1 credit(s), max credits 8, 8 completions allowed; prereq 6112 or instr consent;
Instructor: Walseth,Timothy F
Description: Student may contact the instructor or department for information.

PHCL 8207 Seminar: Psychopharmacology
1 credit(s); prereq instr consent; Credit will not be granted if credit has been received for: NSC 8207;
Instructor: Wilcox,George L
Description: Student may contact the instructor or department for information.

PHCL 8208 Neuropsychopharmacology
A-F only, 3 credit(s); prereq [5212, 6112, Psy 5021, Psy 5061] or instr consent;
Instructor: Roy,Sabita
Description: Student may contact the instructor or department for information.

PHCL 8217 Problems in Investigative Pharmacology
S-N only, 1 credit(s);
Instructor: Loh,Horace H
Description: Student may contact the instructor or department for information.

PHCL 8320 Readings in Neurobiology
1-4 credit(s), max credits 4, 4 completions allowed; prereq instr consent;
Instructor: Fairbanks,Carolyn Ann
Description: Student may contact the instructor or department for information.

Pharmacy
5-110 Weaver-Densford Hall

PHAR 1001 Orientation to Pharmacy
2 credit(s);
Instructor: Lounsbery,Jody Leigh
Description: This is not a self-study course. While it is completely online, there are deadlines for assignments and assessments throughout the semester. No late registrations will be accepted. This course is designed for students seeking an overview of the profession of pharmacy, including the pharmaceutical care practice model, various pharmacy settings, pharmacy education and current opportunities and challenges within the profession. Students use WebVista to view audio-narrated presentations and download handout materials (also available for purchase). Course information is sent to the U of M email addresses of registered students shortly before, and/or on, the first day of classes each Fall, Spring, and Summer term. For more information, see course website or contact pharintr@umn.edu or 612-625-4148.

PHAR 1002 Health Sciences Terminology
2 credit(s); prereq :
Instructor: Taylor,Charles T
Description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
PHAR 1005 Introduction to Drug Therapies of Addiction: Medicine or Menace?
2 credit(s); prereq Medical terminology recommended; Instructor: Lichtblau PhD,Leonard
Description: This online two credit course provides students with the opportunity to explore the drug therapy (pharmacotherapy) of addiction. Through audio-narrated presentations, handouts, and additional online resources, students will gain basic drug therapy knowledge in the area of addiction; including, but not limited to topics such as drug regulation, drug therapy strategies used to treat pain, and how the concepts of tolerance, physical dependence, and addiction influence care. Mechanism of action of various illicit and prescription medications which are commonly misused (e.g. Ritalin), as well as the drug therapy of addiction (e.g. Methadone) will also be covered.
Style: 100% Web Based. This is a self study course with one deadline for all coursework.
Grading: 12% reports/papers, 87% additional semester exams.
Exam Format: There are 4 online, timed exams which have multiple-choice and true/false questions. Exam 4 contains a written portion (paper) in addition to multiple choice and true/false questions.

PHAR 3700 Fundamentals of Pharmacotherapy
A-F only, 3 credit(s); prereq Medical terminology; Credit will not be granted if credit has been received for: PHAR 5700; Instructor: Pittenger,Amy Louise
Description: While this course is completely online, there are three exam deadlines throughout the semester. This course is designed for students pursuing careers that require them to have a basic familiarity with drug therapy. This course is offered totally online and will focus on recognition of brand and generic drug names, their therapeutic classes and common uses. In addition, participants will develop a basic proficiency in the use of drug information resources. With the competencies developed, participants of the course can expect to better review medication lists and work with health communication/documentation.
Style: 100% Web Based.
Grading: 100% additional semester exams. final grade is determined from three exam scores. There is one extra credit option
Exam Format: multiple-choice/online

PHAR 4248 Directed Study: Drugs of Abuse
A-F only, 2 credit(s); prereq Organic chemistry I/II or [organic chemistry I, biochemistry II]; Instructor: Remmel,Rory P
Description: The course will cover the chemical aspects of the active constituents of herbal-based drugs of abuse e.g. marihuana, coca, Salvia, khat, etc. as well as the semi-synthetic or synthetic drugs of abuse such as heroin, morphine, and other opiates, cocaine, methamphetamine, MDMA (Ecstasy), downers and depressants, and date rape drugs such as GHB and Rohypnol. The pharmacology and toxicology of each of the classes of drugs of abuse will be discussed in depth. In addition, the sociological aspects of drug abuse will be presented through selected documentaries and films. Each student will be required to read one book on addiction and provide a written report. Exams will be given on-line in multiple choice short answer
formats. The course is intended for pre-professional students in the health sciences but may be taken by other students in the biomedical sciences with the pre-requisite of Organic Chemistry. The course director, Dr. Rory Remmel, teaches in the College of Pharmacy and received the 2010 Award for Outstanding Contributions to Graduate and Professional Education.

**Style:** 50% Lecture, 40% Film/Video, 10% Discussion. 3:30 to 5:30 on Wednesdays

**Grading:** 40% mid exam, 50% final exam, 10% reports/papers. A-F, S or N

**Exam Format:** Multiple choice

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**PHAR 4294 Directed Study I for Undergraduates**

1-5 credit(s), max credits 10;

**Instructor:** Panyam PhD,Jayanth

**Description:** Student may contact the instructor or department for information.

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**PHAR 5200 Drugs and the U.S. Health Care System**

A-F only, 3 credit(s); prereq [Grad or professional] student; Credit will not be granted if credit has been received for: PHAR 4200W;

**Instructor:** Pittenger,Amy Louise

**Description:** Phar 5200 Drugs and the US Healthcare System 3 cr. Prereqs: graduate student or permission of instructor

**Instructor:** Pittenger, Amy Louise

**Description:** Phar 5200 Drugs and the US Healthcare System 3 cr. Prereqs: graduate student or permission of instructor

**Instructor:** Pittenger, Amy Louise

**Description:** Phar 5200 Drugs and the US Healthcare System 3 cr. Prereqs: graduate student or permission of instructor

**Instructor:** Pittenger, Amy Louise

**Description:** Phar 5200 Drugs and the US Healthcare System 3 cr. Prereqs: graduate student or permission of instructor

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**PHAR 5201 Health Sciences Applied Terminology**

2 credit(s); prerequisite Basic knowledge of human anatomy/physiology;

**Instructor:** Taylor,Charles T

**Description:** Student may contact the instructor or department for information.

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**PHAR 5700 Applied Fundamentals of Pharmacotherapy**

A-F only, 3 credit(s); prereq [Medical terminology, admission to grad program] or instr consent; Credit will not be granted if credit has been received for: PHAR 3700;

**Instructor:** Pittenger,Amy Louise

**Description:** Prerequisite: Medical Terminology and admitted to a graduate program (or permission of instructor) This course is designed for students pursuing careers that require them to have a basic familiarity with drug therapy. This course is offered totally online and will focus on recognition of brand and generic drug names, their therapeutic classes and common uses. In addition, participants will develop a basic proficiency in the use of drug information resources. With the competencies developed, participants of the course can expect to better review medication lists and work with health communication/documentation. As compared to Phar 3700, Phar 5700 participants will complete a multimedia project on a drug-related topic of their choosing, in addition to completing additional learning modules on subjects appropriate to their profession.

**Style:** 100% Web Based.

**Grading:** 10% special projects, 90% additional semester exams.

**Exam Format:** multiple choice/online

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**PHAR 5800 Pharmacotherapy for the Health Professions**

A-F only, 3 credit(s); prereq Nursing grad program;

**Instructor:** Pittenger, Amy Louise

**Description:** Student may contact the instructor or department for information.

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**PHI 1001 Introduction to Logic**

4 credit(s); Credit will not be granted if credit has been received for: PHIL 1001H; Meets CLE req of Mathematical Thinking;

**Instructor:** Berrier, Monica Jean

**Description:** This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions.

Logic and logical are words that we use every day with a variety of meanings, but you may still wonder what a course in logic is actually about. Logic is about sentences and relationships between sentences. What does that mean? Humans' primary means of communicating information is through language, and language is embodied in sentences. However, when we receive information via sentences, we can reason about the information contained in those sentences. So, if you hear someone is an orphan, you would infer that that person's parents died and he or she probably grew up with relatives. This seems like a reasonable inference to make. Logic provides an explanation for why these inferences are reasonable. That is, logic is the study of reliable methods of drawing conclusions from given information.

**Style:** This is a printed correspondence section.

**Grading:** 20% mid exam, 20% final exam, 60% written homework.

**Exam Format:** Supervised, in-person exams

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**PHIL 1002W Introduction to Philosophy**

4 credit(s); Credit will not be granted if credit has been received for: PHIL 1006W; Meets CLE req of Arts/Humanities; meets CLE req of Writing Intensive;

**Instructor:** Scheman, Naomi

**Description:** Through reading and discussing original (or translated) work of Plato, Aristotle, Descartes, Locke, and Mill we will explore some of questions that have been central to the history of Western philosophy and think about how those questions are related to questions that concern us, as residents of the U.S. in the 21st C. We will then read and discuss a selection of papers by our contemporaries, philosophers writing from experiences and perspectives that, for reasons of gender and/or race, have not been well-represented in the philosophical canon. A central theme in our discussions will be the varieties, sources, and legitimacy of authority (e.g., the authority of the state and the different sort of authority of expertise). More important than learning about philosophy will be learning how it do it: how to read carefully and critically; how to explain and evaluate what you have read; how to thoughtfully listen to others, and how to formulate, explain, and revise your own own ideas.

**Style:** 70% Lecture, 20% Discussion, 10% Small Group Activities.

**Grading:** 30% midterm exam, 30% final exam, 40% reflection paper. Mid "exam": 4pp.paper, revised Final "exam": two 2pp. papers Reflection papers: responses to questions about the readings. Extra credit for participation in discussion in class or on-line.
PHIL 1004W Introduction to Political Philosophy
4 credit(s); Credit will not be granted if credit has been received for: PHIL 1004V; Meets CLE req of Arts/Humanities; meets CLE req of Writing Intensive;
Instructor: Holtman, Sarah William
Description: What is the purpose of the state? What obligations does it have to its citizens? What do citizens owe one to another and to the state itself? What are justice, property, liberty, and the "social contract"? How are these concepts related to one another and to an appropriate understanding of political society? We will investigate these and related questions by appeal to works including Hobbes's "Leviathan," Locke's "Second Treatise of Government," and Rousseau's "Social Contract." We will supplement texts by appeal to contemporary political issues (E.G., those surrounding the funding of public education, the provision of welfare and other benefits to the needy, and the use and justification of criminal punishment.
Style: 75% Lecture, 25% Discussion.
Grading: 45% reports/papers, 10% quizzes, 45% other evaluation, exams.
Exam Format: In class essay exams (midterm and final)

PHIL 1005 Scientific Reasoning
4 credit(s); prereq [1st or 2nd] yr student or instr consent; Credit will not be granted if credit has been received for: PHIL 1005H;
Instructor: Love, Alan C
Description: Every day we are bombarded by information derived from scientific research on issues such as genetic engineering and global warming. These claims are directly related to technologies that shape our modern society (e.g., genetically modified food and modes of transportation), and are also central components of contentious public policy discussions. Sometimes the claims appear contradictory, such as those about nutritional benefits: are red wine and chocolate really good for us? What makes claims about these topics "scientific"? What is the form of the reasoning that supports them? How does "science" relate to "technology"? How can we make informed evaluations of scientific claims and their technological outcomes in order to participate knowledgeably in our society's political process and make the best choices in our everyday life? This course addresses these questions (and more) through an introductory analysis of the nature of scientific reasoning. We will evaluate characteristics of theoretical, causal, and statistical hypotheses by exploring a variety of case studies from past and present scientific research. Along the way we will apply our discoveries to contested domains such as reports about extraterrestrials or astrological inference and consider models of decision making that inform our choices about the use of technology, especially when we lack or are unable to secure relevant scientific information. This course is designed for students of all majors with an interest in the topic.
Style: 80% Lecture, 20% Discussion.
Grading: 25% final exam, 24% reports/papers, 24% quizzes, 1% attendance, 2% class participation, 24% problem solving. Attendance/Class participation percentages pertain to discussion sections, not lectures
Exam Format: Short answer
PHIL 1905 Topics: Freshman Seminar
A-F only, 3 credit(s), max credits 6; prereq freshman;
Instructor: Cook, Roy Thomas
Description: Comics were once thought to be appropriate only for children. Recently, however, telling a story by combining drawings and word balloons has acquired an unexpected (but not undeserved!) respectability: The Holocaust memoir Maus won a Pulitzer Prize; the graphic novel Watchmen appeared on Time Magazine’s Top 100 Novels of All-Time list; and Jimmy Corrigan, The Smartest Kid on Earth won the prestigious Guardian First Book Award. In this seminar, we will explore the idea that comics are as legitimate an art form as painting or poetry. We will ask: How do comics differ from other artistic media? How does reading a comic differ from reading poetry or novels? How have comics influenced, and been influenced by, culture and politics? And what, exactly, makes a comic a comic (and not something else)?

PHIL 3001W General History of Western Philosophy: Ancient
Period
4 credit(s); Meets CLE req of Arts/Humanities; meets CLE req of Writing Intensive;
Instructor: Peterson, Sandra Lynne
Description: The course will study the beginnings of philosophy in the Western world. The ancient Greek philosophers to be studied include Heraclitus, Parmenides, Gorgias, Socrates, Plato, Aristotle, and Sextus Empiricus. The course will reflect on some of the answers those thinkers gave to such questions as “What is there?” “What can we know about it?” and “What should we do about it?” In studying these philosophers, we will also consider the question what they thought philosophy was. The course is for both majors and non-majors. Readings will be some fragments of the PreSocratics, several dialogues of Plato’s, selections from Aristotle’s writings, and Sextus Empiricus’ “Outlines of Scepticism.”
Style: 5% Lecture, 95% Discussion.
Grading: 80% reports/papers, 20% class participation.

PHIL 3302W Moral Problems of Contemporary Society
4 credit(s); Credit will not be granted if credit has been received for: PHIL 3322W; Meets CLE req of Civic Life and Ethics; meets CLE req of Writing Intensive;
Instructor: Mason, Michelle N
Description: This course will think, discuss, and write critically about some pressing moral issues that confront us in our lives as individuals and citizens, including problems raised by: freedom of expression, the demands and limits of toleration, affirmative action, abortion, vegetarianism, environmentalism, international aid, punishment, and the just conduct of war. Our goal will be to gain competence in interpreting and assessing philosophical arguments and to bring that competence to bear on our understanding of controversial moral issues by submitting our own moral views to reflection. Majors and non-majors welcome. This course will be web enhanced but the URL is not yet available.
Style: 75% Lecture, 25% Discussion.
Grading: 25% final exam, 65% reports/papers, 10% class participation. first paper worth 15%; papers 2 and 3 worth 25% each.
Exam Format: essay.

PHIL 3305 Medical Ethics
4 credit(s);
Instructor: Hopkins, Jasper
Description: The course deals with a number of typical problems related to brain death, the persistent vegetative state, partial-birth abortion, informed consent, confidentiality, organ donation and retrieval, patients’ rights, physician-assisted suicide, medical futility, human and animal research, medical errors, health-care rationing, managed care, involuntary commitment, forcible treatment, cloning, genetic enhancement, and so on. Attendance is required. There will be three examinations, each covering a different part of the course.
Style: 85% Lecture, 15% Discussion.
Grading: Each exam counts for approximately one-third of the semester grade.
Exam Format: varies.

PHIL 3311W Introduction to Ethical Theory
4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Mason, Michelle N
Description: What reason, if any, is there to do what morality requires? Why care if our actions are morally good or bad, right or wrong, display a virtue or a vice? And might not the factors that contribute to our behaving in one way versus another be, in any case, beyond our control -- leaving attitudes such as guilt, resentment, and blame without any rational foundation? Such questions are among those that contemporary moral theory tries to answer. In this course, we will study what some contemporary philosophers answer to such questions and ourselves reflect on the philosophical problems raised by such topics as: the rationality of morality, the character of moral deliberation and motivation, the nature of moral responsibility, and the significance of moral attitudes toward ourselves and others. In doing so, we will focus on work that views the study of ethical thought, action, and attitudes as requiring a better understanding of their specifically practical rational grounding. Our ultimate aim will be to assess the theoretical reasons these philosophers offer in defense of their answers to our practical questions and, where we find them lacking, to try out some answers of our own. Among the contemporary authors we will read are: Bernard Williams, David Gauthier, Christine Korsgaard, T. M. Scanlon, P. F. Strawson, Warren Quinn, Philippa Foot, and John McDowell.

PHIL 3521 Philosophy of Religion
3 credit(s); prereq credit will not be granted if credit already received for: PHIL 4521;
Instructor: Hopkins, Jasper
Description: If theological claims are not empirical hypotheses, then what cognitive status do they have? Is there a satisfactory answer to Hume’s attack on the credibility of belief in miracles? What is the strongest argument against the claim that God exists? The strongest argument in favor of this claim? Is theism a reasonable belief, irrespective of whether it is a true belief? These and cognate questions are explored in the course. There will be three in-class examinations, each over a different portion of the course. ATTENDANCE REQUIRED.
Style: 85% Lecture, 15% Discussion.
PHIL 3993 Directed Studies
1-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent, dept consent, college consent; 
Instructor: STAFF 
Description: Students may contact the instructor or department for information.

PHIL 4040 Rationalists
3 credit(s), max credits 6; prereq 3005 or instr consent ; 
Instructor: Lewis, Douglas E 
Description: The Amsterdam Jewish community banished the twenty-four year old Benedict (originally Baruch) de Spinoza for his supposed impiety in 1656. Thirty Calvinist synods of the Netherlands had condemned him for his alleged blasphemous Theological-Political Treatise (1670) by 1676. Understandably he decided to wait to have his main work The Ethics (1677) published after his death. Three and a half centuries later Spinoza’s views still excite controversy, as you will learn from our study of his (a) interpretation of scripture, (b) plea for freedom of thought and expression, and (c) argument for the unity of God and nature, thought and body, freedom and necessity, reason and emotion, and morality and happiness. Join me as we examine this important philosophy in the context of that of his contemporaries Anne Conway, Rene Descartes, and Gottfried Leibniz. Both non-philosophy and philosophy majors are welcome. 
Style: 33% Lecture, 67% Discussion. 
Grading: 80% reports/papers, 20% class participation.

PHIL 4085 Wittgenstein
3 credit(s); prereq 3005 or 4231 or instr consent ; Credit will not be granted if credit has been received for: PHIL 4085; 
Instructor: Owens, Joseph I 
Description: Student may contact the instructor or department for information.

PHIL 4105W Epistemology
A-F only, 3 credit(s); prereq 1001 or instr consent; Meets CLE req of Writing Intensive; 
Instructor: Hanks, Peter William 
Description: Epistemology is the theory of knowledge. It is concerned with questions like: What is knowledge? What is the extent of our knowledge? Do we have knowledge of the external physical world? What is skepticism about knowledge? Are there good arguments for skepticism? If so, how should we respond to these arguments? We’ll address these and related questions through the study of historical and contemporary texts.

PHIL 4325 Education and Social Change
A-F only, 4 credit(s); Credit will not be granted if credit has been received for: PHIL 5323; Meets CLE req of Arts/Humanities; meets CLE req of Civic Life and Ethics; 
Instructor: Wallace, John R 
Description: This course focuses on a family of approaches to education that has shown promise in moving societies in several parts of the world toward greater justice, democracy, peace-mindedness, self-understanding and environmental responsibility. This family of approaches is known by various names, including ?popular education,? ?democratic education? and ?participatory education.? The course integrates a seminar, focusing on theory, with a practicum at various places in the Twin Cities, including the Jane Addams School for Democracy, the Southside Community Charter School, the Franklin Library, the Minneapolis Public Libraries Conversation Circles and other places where democratic education is being practiced. The purpose is to provide students a theory-rich apprenticeship in democratic education, an apprenticeship that weaves together first-hand field participation at a democratic education site with the study of theories about and case studies of democratic education. A student will emerge from the course with an understanding of the theory of democratic education, with an appreciation of contexts in which this approach to education has been used in various parts of the world, with a practical understanding of what it takes to function as a democratic educator and to design and facilitate democratic education settings. This course counts toward two liberal education theme requirements: Cultural Diversity and Citizenship and Public Ethics. The course carries 4 credits. 
Style: 15% Lecture, 70% Discussion, 15% Service Learning. 
Grading: 50% reflection paper, 50% class participation.

PHIL 5040 Rationalists
3 credit(s), max credits 6; prereq 3005 or instr consent ; 
Instructor: Lewis, Douglas E 
Description: The Amsterdam Jewish community banished the twenty-four year old Benedict (originally Baruch) de Spinoza for his supposed impiety in 1656. Thirty Calvinist synods of the Netherlands had condemned him for his alleged blasphemous Theological-Political Treatise (1670) by 1676. Understandably he decided to wait to have his main work The Ethics (1677) published after his death. Three and a half centuries later Spinoza’s views still excite controversy, as you will learn from our study of his (a) interpretation of scripture, (b) plea for freedom of thought and expression, and (c) argument for the unity of God and nature, thought and body, freedom and necessity, reason and emotion, and morality and happiness. Join me as we examine this important philosophy in the context of that of his contemporaries Anne Conway, Rene Descartes, and Gottfried Leibniz. Both non-philosophy and philosophy majors are welcome. 
Style: 33% Lecture, 67% Discussion.

PHIL 5085 Wittgenstein
3 credit(s); prereq 3005 or 4231 or instr consent ; Credit will not be granted if credit has been received for: PHIL 4085; 
Instructor: Owens, Joseph I 
Description: Student may contact the instructor or department for information.

PHIL 5201 Symbolic Logic I
4 credit(s); prereq 1001 or instr consent ; 
Instructor: Hanson, William H 
Description: This course is an introduction to the fundamentals of symbolic logic. It is intended for students who have already had some exposure to the subject, such as that offered in Phil 1001. Topics will include syntax and semantics of first-order languages, translation from English to first-order languages and vice versa, natural deduction proofs, truth trees, and some basic results of meta-theory (soundness and completeness of the natural deduction system). Requirements will include exercises to be handed in on a regular basis and five exams (including the final exam). 
Style: 60% Lecture, 40% Discussion. 
Exam Format: Mostly problem solving, some short answer.

PHIL 5993 Directed Studies
1-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent, dept consent, college consent; 
Instructor: STAFF 
Description: Student may contact the instructor or department for information.

PHIL 8081 Seminar: History of Philosophy--Ancient Philosophers
3 credit(s); 
Instructor: Peterson, Sandra Lynne 
Description: The course will consider Socrates, Plato, and Aristotle. A background question will be: what does each of these ancient philosophers think philosophy is? The focusing question of the course will be: what exactly, according to each of these ancient philosophers, is the question and answer conversation called "dialectic" and what does it have to do with philosophy? We will get our view of Socrates from his portrayal in Plato’s works, including the Apology, Euthyphro, Laches and Theaetetus. We will arrive at our understanding of Plato by
considering his portrayal of Socrates and other characters. We will study parts of Aristotle’s Topics, which is a collection of rules for a certain kind of dialectic, and parts of Aristotle’s Metaphysics, especially his discussion of the law of non-contradiction.

PHIL 8220 Seminar: Philosophy of Mathematics
3 credit(s), max credits 6; prereq 5202 or [4xxx or 5xxx] math course or instr consent;
Instructor: Hellman, Geoffrey
Description: Student may contact the instructor or department for information.

PHIL 8420 Seminar: Political Philosophy
3 credit(s), max credits 6; prereq 4321 or 4414 or instr consent;
Instructor: Holtman, Sarah William
Description: Student may contact the instructor or department for information.

PHIL 8620 Seminar: Philosophy of the Biological Sciences
3 credit(s), max credits 6;
Instructor: Love, Alan C
Description: Student may contact the instructor or department for information.

Physical Education
220 Cooke Hall

PE 1004 Diving: Springboard
OPT No Aud, 1 credit(s); prereq 1007 or equiv or instr consent;
Instructor: Street, Meagan A
Description: All class materials provided. Course open to anyone interested in learning about diving as a sport. Course involves notes on technical aspects of competitive diving, actual participation in learning how to dive, safely and correctly.

PE 1007 Beginning Swimming
OPT No Aud, 1 credit(s);
Instructor: STAFF
Description: This course is designed to introduce students to basic aquatic safety and to teach the fundamentals of swimming and hydrodynamics. Students will: gain a basic understanding of the principles of hydrodynamics and stroke mechanics; be introduced to the five basic strokes; demonstrate basic aquatic skills; read about the concepts of hydrotherapy for disabilities and other conditions; and gain knowledge of opportunities which exist for competitive activities and for a lifetime enjoyment of aquatics. The required textbook is American Red Cross “Swimming and Diving”. This same text will be used for both PE 1007 and PE 1107. Students will be swimming and practicing in the pool for every class meeting with the exception of written exam days. Students are welcome to attend more than one section of class for extra practice time.
Style: 10% Lecture, 90% in-water practice
Grading: 20% mid exam, 20% final exam, 25% quizzes, 35% class participation.
Exam Format: Written exams: 25 questions multiple choice; practical quizzes: in-water skills test

PE 1012 Beginning Running
OPT No Aud, 1 credit(s);
Instructor: Eaton, Lois M

PE 1014 Conditioning
OPT No Aud, 1 credit(s);
Instructor: STAFF
Description: Conditioning is a beginning-level class. It is designed to introduce the basic fundamentals of personal fitness. The topics covered are the following: principles of fitness, health-related and motor-skill related components of fitness, principles of training and conditioning programs, nutrition, weight control, common fitness injuries, and stress management. Heart rate monitor required; may be purchased at URCTR for approximately $50.
Style: 5% Lecture, physical activity
Grading: 20% final exam, 20% reports/papers, 30% class participation, 30% other evaluation, attendance.
Exam Format: multiple choice, true/false, matching

PE 1015 Weight Training
OPT No Aud, 1 credit(s);
Instructor: STAFF
Description: Designed as an introductory course in weight training, the course stresses the physiological considerations of weight lifting; selecting exercises for a basic program, charting workouts, nutritional considerations and the safety of weight training.
Style: 70% Lecture, 30% Discussion.
Grading: 20% final exam, 10% reports/papers, 70% class participation.
Exam Format: multiple choice, fill in the blank

PE 1029 Handball
OPT No Aud, 1 credit(s);
Instructor: Hiber, Matthew Frank
Description: This course has been designed as an introductory level activity program for handball players. Its intent is to familiarize students with the rules of handball and teach the fundamental skills of this challenging sport. Daily activities will focus on entry-level drills, playing games, and learning appropriate handball etiquette. Students will be expected to purchase handball gloves, handballs, and protective eyewear. There will be a $35 equipment fee.
Style: 10% Lecture. skills and activities
Grading: 10% mid exam, 10% final exam, 80% class participation.
Exam Format: One T/F test and one short answer test

PE 1031 Sabre Fencing
OPT No Aud, 1 credit(s);
Instructor: Sobalvarro, J Roberto
Description: Basic sabre techniques, movement, an overview of fencing as a recreational sport and an Olympic sport, and the history of fencing.

PE 1032 Badminton
OPT No Aud, 1 credit(s);
Instructor: STAFF
Description: This is a beginning-level class designed to introduce the student to the basic fundamentals of badminton. The following topics will be covered: badminton terminology, game rules of singles and doubles, services, shots, returns, and basic strategies. The text for the course will be “Badminton Today” by Wadood and Tan (1990). General requirements for the course are: 1) assigned reading which the student will be able to apply during on-court exercises; 2) be able to document information learned in class and from readings in the form of a written final exam; and 3) demonstrate court skills which are evaluated through on-court performance assessments. There will be a $10 equipment fee.

PE 1033 Foil Fencing
OPT No Aud, 1 credit(s);
Instructor: Sobalvarro, J Roberto
Description: Fencing fundamentals, including basic foil techniques, movement, a general overview of fencing as a recreational sport and an Olympic sport, and the history of fencing.

PE 1034 Judo
OPT No Aud, 1 credit(s);
Instructor: Crone, Tom
Description: The judo class instructs students in the basic skills of throwing, grappling (matwork), choking and arm lock techniques, and falling skills. These are the basic skills used in contest judo, and also have personal defense application of a very realistic and practical nature. Students are also given an appreciation of the evolution of judo from Jiu-Jitsu, and they learn the fundamental rules and scoring of contest. Action videos are used both for instruction of techniques and appreciation of contests. The principles of judo and its philosophy as they apply to daily life enhancement, are also covered.
Style: 5% Lecture, 5% Discussion. Physical instruction of judo techniques and skill application.
Grading: 15% mid exam, 20% final exam, 65% class participation.
Exam Format: Mid Term & Final: Matching, multiple choice, true/false Physical Exam: Demonstration of skills

PE 1035 Karate
OPT No Aud, 1 credit(s);
Instructor: Fusaro, Robert L
Description: This course will introduce the student to Japanese Shotokan Karate (traditional karate); a style of karate that is natural and functional. Students will learn proper posture and methods to develop power and control utilizing feet, legs, and hips. The principal of body dynamics, which Shotokan Karate is noted for, will enable a person of 100 pounds or less to develop power capable of defending themselves against a person of greater size and weight. Shotokan Karate is a non-contact martial art in which no protective gear or gloves of any type is worn. Therefore, control is essential. Men, women, and children can participate in this exhilarating martial art without fearing for their well-being. Structural foundation is essential for developing a delivery system for blocking, kicking, and punching, techniques which are basic elements of self-defense. These movements will be reviewed throughout the entire semester. A portion of the latter half of the course will be devoted to application of these basic techniques. Purchase of GI uniform is encouraged; GI uniform is available through the instructor at a cost of $35.
Style: 15% Discussion. Training: 5% exams
Grading: 20% mid exam, 70% final exam, 10% other evaluation.
Attendance
Exam Format: Mid-term: 20 short multiple choice questions; Final: physical test on basic movements worked on during the semester.

PE 1036 Racquetball
OPT No Aud, 1 credit(s);
Instructor: STAFF
Description: Learn the fast-paced and exciting sport of racquetball. In addition to learning the skills of racquetball, you will be able to get a workout at the same time. The course will cover the rules, etiquette, basic strategy, and a variety of shots. Students will be introduced to the forehead and backhand drive strokes, lob shots, 2 shots, pinch shots, kill shots, back-wall shots, and a variety of serves. This is an opportunity to start a lifetime sport. There will be a $10 equipment fee.
Style: 10% Lecture. Practicing racquetball skills; 30% playing points.
Grading: 10% mid exam, 20% final exam, 40% class participation, 30% other evaluation. skills test
Exam Format: short answer

PE 1037 Squash Racquets
OPT No Aud, 1 credit(s);
Instructor: Stever, John Ball
Description: This course has been designed as an introductory-level activity program for novice squash players. Its intent is to familiarize the individual with the play, rules, equipment, and courts of the game. Weekly lessons will focus on entry-level technique as well as safety on and around the court. Upon completion of this course, students will: 1) have learned the mechanics of the basic squash strokes; 2) understand positioning and movement on the court; 3) understand and apply the international rules for play; 4) be able to describe the basic dimensions and markings of an international squash racket's court; and 5) be able to select and care for equipment. The texts for the course include the well-illustrated Squash: Steps to Success by Yarrow (1997), and the "International Squash Rules" as published by the World Squash Association on the Internet.
Style: 15% Lecture, 10% Film/Video. 75% on court for drills and games. Much of lecture is also on court.
Grading: 20% mid exam, 20% attendance, 60% other evaluation. On court evaluation of improvement on basic techniques
Exam Format: Multiple choice, T/F

PE 1038 Beginning Tennis
OPT No Aud, 1 credit(s);
Instructor: STAFF
Description: This class is designed for players with little or no experience or for players with experience who want to review the basics. Topics to be covered include: tennis terminology, stroke, fundamentals, game rules, and basic positioning for singles and doubles play, footwork, and tennis etiquette. Students must have official tennis shoes with light-colored soles. There will be a $10 equipment fee.
Style: 15% Discussion. Drill and play
Grading: 25% mid exam, 25% final exam, 50% class participation.
Exam Format: multiple choice, true/false, short answer

PE 1043 Beginning Horse Riding
OPT No Aud, 1 credit(s);
Instructor: Bendickson, Anita Olivia
Description: Course consists of learning basic physical and psychological skills to help the student recognize and act in crisis and pre-crisis situations: to avoid or stop physical assault, harassment, irritating and/or dangerous situations and encounters. Physical skills include basic striking, kicking, shifting (learning to move out of the way), blocking, and specialized techniques for specific situations. Psychological skills include learning to analyze self-defense situations, i.e., what strengths does the student have, what vulnerabilities does his/her opponent have and what opportunities are there to apply those strengths and use those vulnerabilities. This includes developing an understanding of force, eye contact and strong body language, and basic verbal skills such as assertiveness. Class work will include drills in physical techniques to develop coordination and strength, practice time in hitting and kicking bags, many controlled situations with partners (including floor, weapons, and multiple attacker situations) to teach basic skills of analysis and application.
Style: 10% Discussion.
Grading: 50% final exam, 20% reports/papers, 30% class participation.
Exam Format: Physical demonstration of basic skills plus student's choice of one from each of the following four categories (partner exercises): 1) basic blocking, 2) response to a grab from the front, 3) response to a grab from behind, 4) one special situation

PE 1044 Self-Defense
OPT No Aud, 1 credit(s);
Instructor: Brandl, Mary Kathryn
Description: Course consists of learning basic physical and...
psychological skills to help the student recognize and act in crisis and pre-crisis situations: to avoid or stop physical assault, harassment, irritating and/or dangerous situations and encounters. Physical skills include basic striking, kicking, shifting (learning to move out of the way), blocking, and specialized techniques for specific situations. Psychological skills include learning to analyze self-defense situations, i.e., what strengths does the student have, what vulnerabilities does his/her opponent have and what opportunities are there to apply those strengths and use those vulnerabilities. This includes developing an understanding of force, eye contact and strong body language, and basic verbal skills such as assertiveness. Class work will include drills in physical techniques to develop coordination and strength, practice time in hitting and kicking bags, many controlled situations with partners (including floor, weapon, and multiple attacker situations) to teach basic skills of analysis and application.

Style: 10% Discussion.
Grading: 50% final exam, 20% reports/papers, 30% class participation.
Exam Format: Physical demonstration of basic skills plus student's choice of one from each of the following four categories (partner exercises): 1) basic blocking, 2) response to a grab from the front 3) response to a grab from behind 4) one special situation.

PE 1045 Rock Climbing
OPT No Aud, 1 credit(s); prereq Good general health, no [neck or back] problems;
Instructor: STAFF
Description: Safety, knots, equipment, techniques, and anchor systems used in climbing. Course includes all necessary equipment. Held at St. Paul Gym climbing wall.

PE 1046 Tae Kwon Do
OPT No Aud, 1 credit(s);
Instructor: Kim,Il Keun
Description: Fundamentals of Tae Kwon Do. Principles of martial arts, body mechanics of Tae Kwon Do, practical self-defense.

PE 1046 Tae Kwon Do
OPT No Aud, 1 credit(s);
Instructor: Kim,Aaron Hyun Sik
Description: Fundamentals of Tae Kwon Do. Principles of martial arts, body mechanics of Tae Kwon Do, practical self-defense.

PE 1048 Bowling
OPT No Aud, 1 credit(s);
Instructor: Schmid,Michael F
Description: Fundamentals, including stance, approach and delivery, scoring, bowling terminology, and etiquette. Every student is given personalized instruction on an individual basis each class session. Everyone will learn to throw a hook

PE 1048 Bowling
OPT No Aud, 1 credit(s);
Instructor: Pacl,Bryan Christopher
Description: Fundamentals, including stance, approach and delivery, scoring, bowling terminology, and etiquette.

PE 1053 Ice Skating
OPT No Aud, 1 credit(s);
Instructor: Heftly,Kristina
Description: Student may contact the instructor or department for information.

PE 1055 Golf
OPT No Aud, 1 credit(s);
Instructor: STAFF
Description: Proper grip, stance, ball address, swing, club selection, psychological management, rules, and etiquette. Basic instruction in analyzing, assisting with, and coaching golf. The first day of class will take place at the University of Minnesota Les Bolstad Golf Course Clubhouse/Cafeteria, by the putting greens. Directions to the golf course can be found at www.uofmgolf.com/directions.htm .

PE 1059 Track and Field
OPT No Aud, 1 credit(s);
Instructor: STAFF
Description: Track and Field is a beginning-level class. It is designed to introduce the student to the nature and significance of Track and Field. The following topics will be covered: conditioning and training, events and skills, strategies, track and field knowledge, equipment, and facilities and technology.
Style: 10% Lecture. physical activity.
Grading: 20% final exam, 20% reports/papers, 20% in-class presentation, 30% class participation, 10% other evaluation. class attendance.
Exam Format: Multiple choice, T/F, matching.

PE 1065 Beginning Tumbling and Gymnastics
OPT No Aud, 1 credit(s);
Instructor: STAFF
Description: This course is designed for individuals with little or no tumbling/spotting experience. Students will learn the fundamentals of basic tumbling skills including rolls, handstands, cartwheels, extensions, handsprings, and sommies (flips), accompanied by the appropriate spotting techniques. Students will also experience teaching a skill to a small group of classmates. Safety issues in tumbling and gymnastics will be addressed.
Style: 15% Lecture.
Grading: 20% mid exam, 20% final exam, 20% special projects, 40% class participation.
Exam Format: true/false, multiple choice, short answer

PE 1067 Basketball
OPT No Aud, 1 credit(s);
Instructor: STAFF
Description: Participation-based course emphasizing basketball fundamentals such as passing, dribbling, shooting, as well as basic fast-break, offensive and defensive principles. Undergraduate and graduate students are encouraged to join the class. Students will scrimmage at times and will be tested on the rules and basketball fundamentals they learn during the course.
Style: 20% Lecture, 5% Discussion.
Grading: 20% mid exam, 30% final exam, 20% reports/papers, 20% class participation.
Exam Format: multiple choice, true/false, short answer

PE 1071 Beginning Cricket
OPT No Aud, 1 credit(s);
Instructor: Peterson,Charles E
Description: Fundamentals of Cricket. Laws of Cricket, bowling/batting techniques, competitive/recreational Cricket opportunities.

PE 1072 Soccer
OPT No Aud, 1 credit(s);
Instructor: Adamczek,Viktor Istvan
Description: Fundamentals of soccer including sporting behavior both on and off the field, game rules, soccer terminology, participation and competition drills, fundamental soccer skills, practical instruction in strategy.

PE 1072 Soccer
OPT No Aud, 1 credit(s);
Instructor: Wurst,Katie
Description: Fundamentals of soccer including sporting behavior both on and off the field, game rules, soccer terminology, participation and competition drills, fundamental soccer skills, practical instruction in strategy.

PE 1074 Beginning Volleyball
OPT No Aud, 1 credit(s);
Instructor: STAFF
Description: This is an introductory course aimed at the beginning student in volleyball. Students will learn the fundamentals of the sport, including setting, serving, passing,

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
and blocking. The course will also include an understanding of the rules and strategies involved in volleyball. Particular emphasis is placed in practical application of knowledge and game situations.

**Style**: 10% Lecture. Practical practice and application

**Grading**: 20% mid exam, 35% final exam, 45% class participation.

**PE 1077 Lacrosse**

**OPT No Aud, 1 credit(s);**

**Instructor**: Holdsworth, Janet Michele

**Description**: Introduction to lacrosse, techniques, field positions, rules, regulations. Students participate in vigorous exercise activities including running, throwing, catching, and stick handling.

**PE 1078 Ultimate Disc**

**OPT No Aud, 1 credit(s);**

**Instructor**: STAFF

**Description**: Introduction to ultimate disc, techniques, field positions, rules, regulations. Students participate in vigorous exercise activities including running, throwing, and catching.

**PE 1082 Broomball**

**OPT No Aud, 1 credit(s);**

**Instructor**: STAFF

**Description**: Student may contact the instructor or department for information.

**PE 1107 Intermediate Swimming**

**OPT No Aud, 1 credit(s); prereq 1007 or equiv, proficient ability to swim 100 meters or instr consent;**

**Instructor**: STAFF

**Description**: This course is designed to improve a swimmer's stroke proficiency and to develop an appreciation for aquatic safety principles. Students will: gain a more advanced understanding of the principles of hydrodynamics and stroke mechanics, develop greater proficiency in their strokes; demonstrate basic pool-side rescue techniques and use of pool safety equipment; gain an understanding of basic diving techniques and will demonstrate a satisfactory level of proficiency in diving skills; develop an understanding of competitive swimming and diving and will be able to perform starts and turns used, learn the principles of aquatic fitness; gain knowledge of opportunities which exist for competitive activities and for a lifetime enjoyment of aquatics. First day of class we do not swim. Enter through Rec Center main door.

**Style**: 10% Lecture. In-pool practice

**Grading**: 20% mid exam, 20% final exam, 30% quizzes, 30% class participation.

**Exam Format**: written exams - multiple choice; practical exams-in-pool demonstration of skills

**PE 1174 Intermediate Volleyball**

**OPT No Aud, 1 credit(s); prereq [1074 or equiv], instr consent;**

**Instructor**: STAFF

**Description**: Volleyball systems of play. Incorporating offensive/defensive formations. Team play, transition, coaching, officiating.

**PE 1205 Scuba and Skin Diving**

**OPT No Aud, 1 credit(s); prereq Ability to swim 400 yds comfortably or instr consent;**

**Instructor**: Karl, Robert J

**Description**: This course is available to all students and prospective students (through CCE) at the University. The course consists of classroom instruction and practical pool work. SCUBA Certification is not included in the course. The third party necessary for certification (4-open water dives) can be arranged through the instructor at an additional charge. Students may also decide to get a referral letter and take their openwater dives at numerous locations around the world. Classroom subjects include the physics and physiology of diving, equipment, decompression, dive planning, emergencies, and the marine environment. Some topics require mandatory attendance.

Pool work covers all necessary applications to diving. All students must be comfortable being in the water, and must be able to swim a minimum of 400 yards. Students should plan on attending all class and pool sessions, as quizzes will be administered throughout the course and all pool work is built on previously learned skills. All evening classes and all day school students whose classes start on Thursdays, must come to the first class with appropriate swimming attire (i.e. swimming suits). Evening classes have a 2-hr. lecture period followed by 2 hrs. of pool work. Day classes have lectures on Tuesdays and pool work on Thursdays. Please check the website http://SuperiorExpeditions.com for forms and notes for requirements and limitations for SCUBA diving. There will be a $118 course fee. Additionally there is a $60 course Kit that needs to be purchased from the instructor the first day of class.

**Style**: 50% Lecture, 50% Laboratory

**Grading**: 33% final exam, 33% quizzes, 33% class participation.

**Exam Format**: multiple choice

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**Physical Medicine and Rehabilitation**

**500 Boynton Health Service (Box 297 Mayo)**

**PMED 8200 Physical Medicine and Rehabilitation Service**

1-15 credit(s), max credits 15, 1 completion allowed; prereq enrolled in PMed residency training program;

**Instructor**: Dykstra, Dennis Dale

**Description**: Student may contact the instructor or department for information.

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**Physical Therapy**

**382 Children's Rehabilitation Center**

**PT 1002 Orientation to Physical Therapy**

S-N only, 1 credit(s);

**Instructor**: Olson-Kellogg, Becky Jo

**Description**: This course is an introduction to the profession of Physical Therapy. The course is intended for undergraduate university students who are interested in pursuing Physical Therapy as a career, or who want to learn more about the field of Physical Therapy to assist them in making a career decision.

**PT 1002 Orientation to Physical Therapy**

S-N only, 1 credit(s);

**Instructor**: Koehler, Linda Ann

**Description**: This course is an introduction to the profession of Physical Therapy. The course is intended for undergraduate university students who are interested in pursuing Physical Therapy as a career, or who want to learn more about the field of Physical Therapy to assist them in making a career decision.

**PT 6002 Ethics in Public Health: Research and Policy**

S-N only, 1 credit(s), max credits 2;

**Instructor**: Di Fabio, Richard P

**Description**: Student may contact the instructor or department for information.

**PT 6213 Clerkship I**

A-F only, 2 credit(s); prereq Registered PT student;

**Instructor**: Lojovich, Jeanne Marie

**Description**: Student may contact the instructor or department for information.

**PT 6215 Clerkship III**

A-F only, 1 credit(s), max credits 2, 1 completion allowed; prereq Registered PT student;

**Instructor**: Lojovich, Jeanne Marie

**Description**: Student may contact the instructor or department for information.
PT 6220 Clinic Volunteer
No Grade, 1 credit(s); max credits 6, 6 completions allowed;
Instructor: Anderson,Kathleen
Description: Student may contact the instructor or department for information.

PT 6231 Clinical Biomechanics
A-F only, 5 credit(s); prereq Intro calculus, physics, registered PT student; Credit will not be granted if credit has been received for: PMED 5281;
Instructor: Ludewig,Paula M
Description: Student may contact the instructor or department for information.

PT 6280 Clinical Assessment
A-F only, 4 credit(s); prereq Registered PT student;
Instructor: Glassoe,Ward M
Description: Student may contact the instructor or department for information.

PT 6281 Scientific Foundations I: Theory of Therapeutic Exercise
A-F only, 3 credit(s); prereq Registered PT student; Credit will not be granted if credit has been received for: RTT 5281;
Instructor: Thompson PhD,LaDora V
Description: Student may contact the instructor or department for information.

PT 6283 Musculoskeletal I
A-F only, 7 credit(s); prereq enrolled PT student;
Instructor: Anderson,Kathleen
Description: Student may contact the instructor or department for information.

PT 6293 Clinical Internship I
S-N only, 10 credit(s); prereq Registered 3rd yr PT student;
Instructor: Lojovich,Jeannie Marie
Description: Student may contact the instructor or department for information.

PT 6296 Clinical Internship II
S-N only, 10 credit(s); prereq Registered PT Student;
Instructor: Lojovich,Jeannie Marie
Description: Student may contact the instructor or department for information.

PT 6340 Human Growth and Development
A-F only, 3 credit(s); prereq Registered PT student;
Instructor: Koehler,Linda Ann
Description: Student may contact the instructor or department for information.

PT 7000 Neurological Theory and Neuroscience in Physical Therapy
A-F only, 1-6 credit(s); max credits 6, 6 completions allowed; prereq Admitted to Transisitional Doctor of Physical Therapy Program;
Instructor: Lojovich,Jeanne Marie
Description: Student may contact the instructor or department for information.

PT 7009 Capstone Experience
A-F only, 3 credit(s); prereq Must be a DPT student;
Instructor: Carey,James Robert
Description: Student may contact the instructor or department for information.

PT 7010 Topics in Geriatric Rehabilitation I
S-N only, 2 credit(s); prereq Licensed physical therapist
Instructor: Olson-Kellogg,Becky Jo
Description: Student may contact the instructor or department for information.

PT 8131 Research Seminar I
A-F only, 1 credit(s); prereq Grad PT major;
Instructor: Carey,James Robert
Description: Student may contact the instructor or department for information.

PT 8131 Research Seminar I
A-F only, 1 credit(s); prereq Grad PT major;
Instructor: Snow MD,PhD,LeAnn M
Description: Student may contact the instructor or department for information.

PT 8131 Research Seminar I
A-F only, 1 credit(s); prereq Grad PT major;
Instructor: Di Fabio,Richard P
Description: Student may contact the instructor or department for information.

PT 8131 Research Seminar I
A-F only, 1 credit(s); prereq Grad PT major;
Instructor: Thompson PhD,LaDora V
Description: Student may contact the instructor or department for information.

PT 8131 Research Seminar I
A-F only, 1 credit(s); prereq Grad PT major;
Instructor: Lowe,Dawn Annette
Description: Student may contact the instructor or department for information.

PT 8131 Research Seminar I
A-F only, 1 credit(s); prereq Grad PT major;
Instructor: Kukulka,Carl G
Description: Student may contact the instructor or department for information.

PT 8131 Research Seminar I
A-F only, 1 credit(s); prereq Grad PT major;
Instructor: Nuckley,David J
Description: Student may contact the instructor or department for information.

PT 8131 Research Seminar I
A-F only, 1 credit(s); prereq Grad PT major;
Instructor: Ludewig,Paula M
Description: Student may contact the instructor or department for information.

PT 8131 Research Seminar I
A-F only, 1 credit(s); prereq Grad PT major;
Instructor: Thompson PhD,LaDora V
Description: Student may contact the instructor or department for information.

PT 8193 Research Problems in Physical Therapy
A-F only, 1-7 credit(s); max credits 7, 7 completions allowed; prereq Grad PT major;
Instructor: Di Fabio,Richard P
Description: Student may contact the instructor or department for information.

PT 8193 Research Problems in Physical Therapy
A-F only, 1-7 credit(s); max credits 7, 7 completions allowed; prereq Grad PT major;
Instructor: Snow MD,PhD,LeAnn M
Description: Student may contact the instructor or department for information.

PT 8193 Research Problems in Physical Therapy
A-F only, 1-7 credit(s); max credits 7, 7 completions allowed; prereq Grad PT major;
Instructor: Kimberey,PT, PhD,Teresa Jacobson
Description: Student may contact the instructor or department for information.

PT 8193 Research Problems in Physical Therapy
A-F only, 1-7 credit(s), max credits 7, 7 completions allowed; prerequisite Grad PT major; Instructor: Di Fabio, Richard P; Description: Student may contact the instructor or department for information.

**PHYS 1101W Introductory College Physics I**
4 credit(s); prerequisite High school algebra, plane geometry, trigonometry; primarily for students interested in technical areas; Meets CLE req of Physical Sciences; meets CLE req of Writing Intensive; Instructor: STAFF; Description: This is the first part of a course sequence designed to prepare you for work in your field by: having solid conceptual understanding of the way the real world works based on a few fundamental principles of physics; being able to solve realistic problems using logical reasoning and quantitative problem solving skills; applying those physics concepts and problem solving skills to new situations; and learning to effectively communicate technical information. To achieve these goals, this course requires an in depth understanding of the material. Phys 1101W will emphasize the dynamics approach to physics emphasizing the description of motion of interacting objects and the forces that they exert on each other. No previous physics knowledge is assumed, but it is assumed that you are able to do algebra, including solving quadratic and simultaneous equations, interpret simple graphs, basic geometry, especially the geometry of triangles; the use of sine, cosine, and tangent; and the Pythagorean Theorem. A laboratory requires you to apply both the concepts and problem solving skills taught in this course to the real world. It also emphasizes technical communications skills. A discussion section gives you the opportunity to discuss your conceptual understanding and problem solving skills while you practice solving problems with other students. The laboratory and discussions sections emphasize collaborative problem solving as a powerful learning tool and as a preparation for work in your profession.

**PHYS 1102W Introductory College Physics II**
4 credit(s); prerequisite 1101W or 1107; Meets CLE req of Physical Sciences; meets CLE req of Writing Intensive; Instructor: STAFF; Description: This is the second term of a course sequence designed to prepare you for work in your field by: having solid conceptual understanding of the way the real world works based on a few fundamental principles of physics; being able to solve realistic problems using logical reasoning and quantitative problem solving skills; applying those physics concepts and problem solving skills to new situations; and learning to effectively communicate technical information. To achieve these goals, this course requires an in depth understanding of the material. This course will emphasize the application of the principles and skills learned in Physics 1101W to more complex, abstract, and realistic situations involving topics from fluids, thermal physics, waves, electricity, magnetism, optics, and atomic physics. A laboratory requires you to apply both the concepts and problem solving skills taught in this course to the real world. It will also emphasize technical communications skills. A discussion section gives you the opportunity to discuss your conceptual understanding and your problem solving skills by practicing working problems with other students. The laboratory and discussions sections emphasize collaborative problem solving as a powerful learning tool and as a preparation for work in your profession.

**PHYS 1011 Physical World**
A-F only, 3 credit(s); prerequisite 1 yr high school algebra; Instructor: Cassola, Robert L; Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. The underlying purpose of this course is to provide you with a firm, elementary understanding of the principles of physics. The material covered in this course is fundamental and forms the basis for virtually all future courses in physics and engineering. It is hoped that as you proceed through this course, you will not only gain some facility in applying the concepts of physics to problems of practical interest, but that you will also gain an awareness of, and an appreciation for, the unifying principles on which physics is based.

**PHYS 1017 Introductory Physics Online I**
4 credit(s); prerequisite High school algebra, plane geometry, trigonometry; Instructor: STAFF; Description: Student may contact the instructor for information.

**PHYS 1017 Introductory Physics Online II**
4 credit(s); prerequisite High school algebra, plane geometry, trigonometry; Instructor: Border, Pete Mac; Description: This is a fully online course offered through Online
PHYS 1201W Introductory Physics for Biology and Pre-medicine I
5 credit(s); prerequisite [High school or college] calculus, trigonometry, algebra; Credit will not be granted if credit has been received for: PHYS 1301W; Meets CLE req of Physical Sciences; meets CLE req of Writing Intensive; Instructor: STAFF
Description: This is the first semester of a 2 semester course designed primarily for students majoring in the biological sciences or pre-medicine. It is not a survey course of all physics but requires an in-depth understanding of fundamental principles and their application. A course in calculus equivalent to Math 1271, 1371 or 1281 taken previously or simultaneously is required. Students should have a working knowledge of derivatives as well as algebra and the geometry of right triangles. The course emphasizes an understanding of the fundamental principles of physics and their use in solving realistic quantitative problems of the type found in biological applications. The first semester develops the concepts of forces and conservation principles to determine the behavior of a system. The importance of energy transfer between objects in a system and between systems will be emphasized, especially within the framework of thermodynamics. A required laboratory illustrates the application of the concepts and problem solving skills taught in this course to the real world. It will also emphasize technical communications skills. A discussion section gives the opportunity to discuss your conceptual understanding and your problem solving skills by practicing working problems with other students. The laboratory and discussions sections will emphasize collaborative problem solving as a powerful learning tool and as a preparation for work in your profession.

PHYS 1202W Introductory Physics for Biology and Pre-medicine II
5 credit(s); prerequisite 1201W; Credit will not be granted if credit has been received for: PHYS 1302W; Meets CLE req of Physical Sciences; meets CLE req of Writing Intensive; Instructor: STAFF
Description: This is the continuation of physics 1201W designed primarily for students majoring in the biological sciences or preparing for medical school. This is not a survey course of all physics but requires an in-depth understanding of fundamental principles and their application. A course in calculus equivalent to Math 1272, 1272 or 1282 taken previously or simultaneously is required. Students should have a working knowledge of derivatives and integrals as well as all of the mathematics skills used in 1201W. The course emphasizes an understanding of the fundamental principles of physics and their use in solving quantitative problems of the type found in biological applications. The second semester involves the study of the optics, electrical circuits, the properties of the electric and magnetic force, and nuclear processes relevant to biological systems. A required laboratory illustrates the application of the concepts and problem solving skills taught in this course to the real world. It will also emphasize technical communications skills. A discussion section gives the opportunity to discuss your conceptual understanding and your problem solving skills by practicing working problems with other students.

PHYS 1302W Introductory Physics for Science and Engineering II
4 credit(s); prerequisite Concurrent registration is required (or allowed) in Math 1272 or Math 1372 or Math 1572; Credit will not be granted if credit has been received for: PHYS 1202W; Meets CLE req of Physical Sciences; meets CLE req of Writing Intensive; Instructor: STAFF
Description: This is the 2nd of a 3 semester intro course in physics for students in science and engineering. 1302W emphasizes the application of the physics principles learned in 1301W to electrical and magnetic interactions. The course is designed to prepare you for work in your field by: having solid conceptual understanding of the way the real world works based on a few fundamental principles of physics; being able to solve realistic problems using logical reasoning and quantitative problem solving skills; applying those physics concepts and problem solving skills to new situations; and learning to effectively communicate technical information. To achieve these goals, this course requires you to understand the material in depth. Emphasis will be given to the application of physics principles to real-life situations, and will use problems designed to simulate such situations. This course assumes a good working knowledge of the concepts and skills in 1301W. Because of the nature of this material, this course will be more abstract and mathematical than 1301W. A lab is included to allow you to apply both the concepts and problem solving skills to the real world. It will also emphasize technical communications skills. A discussion section will give you the opportunity to discuss your conceptual understanding and practice your problem solving skills with other students.

PHYS 2311 Modern Physics
4 credit(s); prerequisite [1302 or 1402], Chem 1022, Math 2243; Instructor: Cassola,Robert L
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work...
PHSL 3051 Human Physiology
4 credit(s); prereq [Biol 1009 or 1 yr college biol], 1 yr college chem; Credit will not be granted if credit has been received for: PHSL 3050;
Instructor: Anderson PhD,Lisa Carney
Description: Human Physiology is a 4 credit class designed for science majors and pre-allied health sciences majors. This course covers basic science principles of cell transport, cell signaling and major organ systems (nervous, muscle, circulation, respiration, endocrine, renal, gastrointestinal, energy metabolism). Preparation in basic chemistry (two semesters) and biology (one semester) is strongly recommended. Three lecture sessions and one two-hour lab per week. See the following url for a sample syllabus:
See our department website for more information about registration.
http://physiology.med.umn.edu/courses/phsl3051/3051Registration.html
Style: 70% Lecture, 5% Film/Video, 10% Laboratory, 5% Small Group Activities, 10% Demonstration. Three hours of lecture per week will time for small group activities. Two hours of lab per week with a combination of videos, hands on labs, demonstrations, and critical thinking exercises.
Grading: 48% mid exam, 32% final exam, 10% laboratory evaluation. 3 exams worth 16% each. A cumulative final exam worth 32% and lab work worth 10%
Exam Format: Multiple choice questions

PHSL 3061 Principles of Physiology
4 credit(s); prereq 1 year college chem and physics and math through integral calculus;
Instructor: Anderson PhD,Lisa Carney
Description: Student may contact the instructor or department for information.

PHSL 3062W Research Paper for Physiology Majors
A-F only, 1 credit(s); prereq Concurrent registration is required (or allowed) in 3061, physiology major, 1 yr [college chem, physics], math through integral calculus; Meets CLE req of Writing Intensive;
Instructor: Barnett,Vincent A
Description: Student may contact the instructor or department for information.

PHSL 3095 Problems in Physiology
1-5 credit(s), max credits 20, 20 completions allowed; prereq concurrent enrollment in college physiology, instr consent;
Instructor: Barnett,Vincent A
Description: Student may contact the instructor or department for information.

PHSL 3701 Physiology Laboratory
A-F only, 2 credit(s); prereq Physiology major; Credit will not be granted if credit has been received for: BMEN 3701;
Instructor: Iaizzo PhD,Paul Anthony
Description: Student may contact the instructor or department for information.

PHSL 4095H Honors Problems in Physiology
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed; prereq Concurrent registration is required (or allowed) in 3061, physiology honors candidate, approval of director of undergrad studies in physiology;
Instructor: Barnett,Vincent A
Description: Student may contact the instructor or department for information.

PHSL 4900 Advanced Physiology Teaching Laboratory
A-F only, 1-6 credit(s), max credits 12; prereq [3051 or [3061, 3071]], instr consent ;
Instructor: Katz,Stephen A
Description: Student may contact the instructor or department for information.

PHSL 5061 Principles of Physiology for Biomedical Engineering
4 credit(s); prereq Biomedical engineering grad, one yr college chem and physics and math through integral calculus;
Instructor: Anderson PhD,Lisa Carney
Description: Student may contact the instructor or department for information.

PHSL 5094 Research in Physiology
1-5 credit(s), max credits 20, 20 completions allowed; prereq instr consent;
Instructor: Barnett,Vincent A
Description: Student may contact the instructor or department for information.

PHSL 5094 Research in Physiology
1-5 credit(s), max credits 20, 20 completions allowed; prereq instr consent;
Instructor: Katz,Stephen A
Description: Student may contact the instructor or department for information.

PHSL 5095 Problems in Physiology
1-5 credit(s), max credits 20, 20 completions allowed; prereq instr consent;
Instructor: Barnett,Vincent A
Description: Student may contact the instructor or department for information.

PHSL 5095 Problems in Physiology
1-5 credit(s), max credits 20, 20 completions allowed; prereq instr consent;
Instructor: Katz,Stephen A

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule. 364
Description: Student may contact the instructor or department for information.

PBS 8993 Directed Studies
- 1-5 credit(s), max credits 15, 15 completions allowed; prereq PBio grad student, instr consent;
  Instructor: Glazebrook, Jane
Description: Student may contact the instructor or department for information.

PBS 8994 Research
- 1-5 credit(s), max credits 10, 10 completions allowed; prereq PBio grad student, instr consent;
  Instructor: Glazebrook, Jane
Description: Student may contact the instructor or department for information.

Plant Biology
220 Biological Sciences Center

PBS 4793W Directed Studies: Writing Intensive
- S-N only, 1-7 credit(s), max credits 7, 7 completions allowed; prereq instr consent; Meets CLE req of Writing Intensive;
  Instructor: STAFF
Description:

PBS 4794W Directed Research: Writing Intensive
- S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent, dept consent; Meets CLE req of Writing Intensive;
  Instructor: STAFF
Description:

PBS 4993 Directed Studies
- S-N only, 1-7 credit(s), max credits 7, 7 completions allowed; prereq instr consent;
  Instructor: STAFF
Description: Contract between student and advisor required, plus department approval. Credits arranged.

PBS 4994 Directed Research
- S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent;
  Instructor: Olszewski, Neil E
Description: Student may contact the instructor or department for information.

PBS 4994 Directed Research
- S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent;
  Instructor: Weiblen, George D
Description: Student may contact the instructor or department for information.

PBS 4994 Directed Research
- S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent;
  Instructor: Painter, Melissa L
Description: Student may contact the instructor or department for information.

PBS 4994 Directed Research
- S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent;
  Instructor: Gleason, Florence K
Description: Student may contact the instructor or department for information.

PBS 4994 Directed Research
- S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent;
  Instructor: Springer, Nathan Michael
Description: Student may contact the instructor or department for information.

PBS 4994 Directed Research
- S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent;
  Instructor: McLaughlin, David J
Description: Student may contact the instructor or department for information.

PBS 4994 Directed Research
- S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent;
  Instructor: STAFF
Description: Student may contact the instructor or department for information.

PBS 4994 Directed Research
- S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent;
  Instructor: STAFF
Description: Student may contact the instructor or department for information.

PBS 5115 Advanced Clinical Physiology I for Nurse Anesthetists
- A-F only, 3 credit(s); prereq instr consent;
  Instructor: Anderson, PhD, Lisa Carney
Description: Student may contact the instructor or department for information.

PBS 5201 Computational Neuroscience I: Membranes and Channels
- 3 credit(s); prereq calculus through differential equations; Credit will not be granted if credit has been received for:
  Instructor: Miller, Robert F
Description: Student may contact the instructor or department for information.

PBS 5700 Cell Physiology
- A-F only, 4 credit(s); prereq [Two semesters of physics/chemistry, calculus, one semester of systems-level physiology] or instr consent;
  Instructor: Palmer, Melissa L
Description: Student may contact the instructor or department for information.

PBS 5701 Physiology Laboratory
- A-F only, 1-2 credit(s), max credits 2; prereq instr consent;
  Instructor: Katz, Stephen A.
Description: Student may contact the instructor or department for information.

PBS 5726 Selected Topics in Autonomic and Neuroendocrine Regulation
- S-N only, 1 credit(s);
  Instructor: Engeland, William C
Description: Student may contact the instructor or department for information.

PBS 5722 Central Regulation of Autonomic Function
- A-F only, 3 credit(s); prereq NSC 5561 or instr consent;
  Instructor: Engeland, William C
Description: Student may contact the instructor or department for information.

PBS 8081 Integrative Plant Biology: Connecting Molecules to Ecosystems
- A-F only, 3 credit(s); prereq Plant biological sciences grad student or instr consent;
  Instructor: Gantt, Steve
Description: Student may contact the instructor or department for information.

PBS 8900 Seminar
- S-N only, 1-2 credit(s), max credits 4, 4 completions allowed;
  Instructor: Muehlbauer, Gary John
Description: Student may contact the instructor or department for information.

PBS 8900 Seminar
- S-N only, 1-2 credit(s), max credits 4, 4 completions allowed;
  Instructor: Ward, John M
Description: Student may contact the instructor or department for information.

PBS 8993 Directed Studies
- 1-5 credit(s), max credits 15, 15 completions allowed; prereq PBio grad student, instr consent;
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<thead>
<tr>
<th>Course Title</th>
<th>Instructor</th>
<th>Description</th>
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<tbody>
<tr>
<td>PBIO 4994 Directed Research</td>
<td>S-N only, 1-6 credit(s), max credits 42, 7 completions allowed; prereq instr consent</td>
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<td>Instructor: Marks,M David</td>
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<td>Instructor: Wick,Susan M</td>
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<td>Instructor: Brambli,Robert Morgan</td>
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<td>Instructor: Silflow,Carolyn D.</td>
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<td>Instructor: Ni,Min</td>
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<td>Instructor: Ward,John M</td>
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<td>Instructor: VandenBosch,Kathryn A</td>
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<td>Instructor: Gray,William M</td>
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<td>Instructor: Tiffin,Peter L</td>
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This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
### PLPA 5412 Plant Physiology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credit(s)</th>
<th>Prerequisites</th>
<th>Instructor</th>
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<td>Plant Physiology</td>
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<td>Biol 2022 or Biol 3002 or Biol 3007</td>
<td>Gantt, Steve</td>
<td>Plant Physiology 5412 is designed for advanced undergraduates and first year graduate students. The course is focused on physiological processes that are specific to plants. A background understanding of genetics and biochemistry is expected. Topics include mechanisms of plant water relations, vascular transport in the xylem and phloem, photosynthesis and respiration, responses to environmental stimuli such as drought, plant mineral nutrition and membrane transport, cell wall structure, plant growth and development including responses to light and hormones. Grades are based on four non-cumulative exams including the final exam.</td>
</tr>
<tr>
<td>PBIO 5412</td>
<td>Plant Physiology</td>
<td>3</td>
<td>Biol 3002 or Biol 3007</td>
<td>Ni, Min</td>
<td>Plant Physiology 5412 is designed for advanced undergraduates and first year graduate students. The course is focused on physiological processes that are specific to plants. A background understanding of genetics and biochemistry is expected. Topics include mechanisms of plant water relations, vascular transport in the xylem and phloem, photosynthesis and respiration, responses to environmental stimuli such as drought, plant mineral nutrition and membrane transport, cell wall structure, plant growth and development including responses to light and hormones. Grades are based on four non-cumulative exams including the final exam.</td>
</tr>
</tbody>
</table>

#### Exam Format:
- **Style:** 100% Lecture.
- **Grading:** 25% mid exam, 25% final exam, 50% other evaluation.
- **Exam Format:** Mostly short answer, some multiple choice, some problems solving.

### PBIO 5960 Special Topics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credit(s)</th>
<th>Prerequisites</th>
<th>Instructor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBIO 5960</td>
<td>Special Topics</td>
<td>1-3</td>
<td>Biol 2022 or Biol 3002 or Biol 3007</td>
<td>Springer, Nathan Michael</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
<tr>
<td>PLPA 5960</td>
<td>Special Topics</td>
<td>1-3</td>
<td>Biol 2022 or Biol 3002 or Biol 3007</td>
<td>Shaw, Ruth Geyer</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
</tbody>
</table>

#### Exam Format:
- **Style:** 100% Lecture.
- **Grading:** 25% mid exam, 25% final exam, 50% other evaluation.
- **Exam Format:** Mostly short answer, some multiple choice, some problems solving.

### PLPA 5301 Plant Genomics

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<tr>
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<th>Prerequisites</th>
<th>Instructor</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PLPA 5301</td>
<td>Plant Genomics</td>
<td>3</td>
<td>Intro course in genetics or instr consent</td>
<td>Young, Nevin Dale</td>
<td>Plant genomics is a course for graduate and advanced undergraduate students who are interested in recent discoveries in genomics and bioinformatics applied to the study of plants. Students learn strategies for structural and functional genomic analysis by exploring the genomes of model plant systems, comparative genomics, evolution of gene families, genome expression and genome restructuring. Students learn the fundamentals of sequence analysis, data-base searching and data-mining through computer labs and independent projects. Most class sessions consist of lectures, discussions, exercises presented in the laboratory. Supplementary readings will be available on library reserve. Particular emphasis is placed on the importance of plant diseases to human welfare and in human history. Course Objectives: Students will: 1) Become familiar with the agents that cause plant disease. 2) Understand the relationships of hosts, pathogens, and environment that determine the occurrence and severity of plant diseases. 3) Learn how plant diseases are managed or controlled. 4) Learn how plant diseases have affected humans both historically and in modern times. 5) Learn to identify a selection of plant diseases that occur commonly in Minnesota. 6) Learn basic laboratory techniques used to detect, identify and manipulate plant pathogens.</td>
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</table>

### PLPA 5090 Research in Plant Pathology

<table>
<thead>
<tr>
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<th>Prerequisites</th>
<th>Instructor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLPA 5090</td>
<td>Research in Plant Pathology</td>
<td>1-4</td>
<td>max credits 4, 1 completion allowed</td>
<td>STAFF</td>
<td>Assignment of a special problem to undergraduates desiring an opportunity for independent research in plant pathology. The student determines the problem.</td>
</tr>
</tbody>
</table>

#### Style:
- 100% Laboratory.

#### Grading:
- 100% laboratory evaluation.

### PLPA 4096 Professional Experience Program: Internship

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credit(s)</th>
<th>Prerequisites</th>
<th>Instructor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLPA 4096</td>
<td>Professional Experience Program: Internship</td>
<td>1-3</td>
<td>max credits 6, 6 completions allowed; COAFES undergrad, complete internship contract available in COAFES Career Services before registering</td>
<td>STAFF</td>
<td>Practicum may be completed in government, higher education or private industry setting. Directed toward senior undergraduates.</td>
</tr>
</tbody>
</table>

#### Style:
- 100% other evaluation.

#### Grading:
- Job performance, self-evaluation.

### PLPA 5090 Issues in Plant Pathology

<table>
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<tr>
<th>Course Code</th>
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<th>Description</th>
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<tbody>
<tr>
<td>PLPA 5090</td>
<td>Issues in Plant Pathology</td>
<td>1-4</td>
<td>max credits 4, 1 completion allowed</td>
<td>STAFF</td>
<td>Current topics and research in plant pathology. Directed at undergraduates (junior and senior) as well as graduate students. Consult Class Schedule or department for current offering.</td>
</tr>
</tbody>
</table>

#### Style:
- 50% Lecture, 50% Discussion.

#### Grading:
- 100% special projects. depends on topic and instructor.

### PLPA 5203 Introduction to Fungal Biology

<table>
<thead>
<tr>
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<th>Prerequisites</th>
<th>Instructor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLPA 5203</td>
<td>Introduction to Fungal Biology</td>
<td>3</td>
<td>BIOL 1009 or equiv</td>
<td>Peay, Kabir Gabriel Alishan</td>
<td>Student may contact the instructor or department for information.</td>
</tr>
</tbody>
</table>

### PLPA 5203 Introduction to Fungal Biology

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### PLPA 5301 Plant Genomics

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#### Style:
- 100% Laboratory.

#### Grading:
- 100% laboratory evaluation.
PLSH 3001 Intermediate Polish
5 credit(s); prerequisite 1102 or equiv; Credit will not be granted if credit has been received for: PLSH 4103;
Instructor: Polakiewicz, Leonard Anthony
Description: This course covers the main aspects of advanced Polish and emphasizes proficiency in all four language skills: listening, reading, speaking, and writing. The textbooks used are: Oscar Swan's "Intermediate Polish," Alexander Schenker's "Fifteen Modern Polish Short Stories," and two books of supplemental material developed by the instructor. The course is designed to satisfy CLA language proficiency requirements. Target audience includes: undergraduate and graduate students, particularly those interested in Eastern-Central European Area Studies, Slavic Studies and potentially seeking employment in Eastern Europe.
Style: 30% Lecture. Recitation and interactive activities.
Grading: 30% final exam, 25% quizzes, 30% class participation, 5% laboratory evaluation, 10% other evaluation. Final oral exam; note: class participation includes presentations.
Exam Format: fill in the blank, answer questions, translation, brief essays

POL 1001 American Democracy in a Changing World
4 credit(s); meets CLE req of Social Sciences;
Instructor: Abernathy, Scott F
Description: This course is intended to introduce students to the expressed hopes of the American people for their government and to the institutions and processes that have been created and recreated to achieve these hopes. What do we mean by good government? Have we achieved it? How do we build it? Through an examination of the roles of American political institutions and the behavior of American citizens, we will be able to critically reflect on issues such as political and economic inequality in the U.S., the role of American political and economic power in the world, and the possibility for an American public policy that lives up to the ideals of the founders. By the end of the semester students should have a basic understanding of the structure and function of American government as well as an increased ability to critically reflect on the degree to which our institutions, processes, and citizens live up to the expectations placed on them.
Style: 60% Lecture, 20% Discussion, 20% Group Activities.
Grading: 50% mid exam, 25% final exam, 25% reports/papers.

POL 1054 Repression and Democracy Around the World
4 credit(s); meets CLE req of Global Perspectives; meets CLE req of Social Sciences;
Instructor: Shivley, W. Phillips
Description: Before you attend the first class, verify the room location in the online Class Schedule.
POL 1201 Political Ideas and Ideologies
4 credit(s); Meets CLE req of Civic Life and Ethics; meets CLE req of Historical Perspectives;
Instructor: Beaumont, Elizabeth
Description: This course examines political ideas and their role in the past and present. It is designed to help us become more reflective political thinkers and actors by analyzing key concepts, including freedom and equality, and exploring their relation to central questions about politics: What is a good or just political community? What kinds of values, institutions, leaders, and citizens does it require? What makes political power legitimate and when is rebellion justified? What are the rights and roles of the members of a political community? Seeking meaningful connections between the political concerns of the past and the problems that shape our own lives, we will explore ideas emerging from influential thinkers in several important eras: Ancient Greece and China (Plato, Confucius), to Renaissance Italy and North Africa (Ibn Khaldun, Machiavelli), the European Enlightenment ( Hobbes, Locke, Rousseau, Mary Wolstonecraft, Mill), and modern and 20th century thinkers (Marx, Freud, Franz Fanon, Martin Luther King, Jr., Malcolm X) as well as a few contemporary commentators (Francis Fukuyama, Khaled Abou El Fadl, M. A. Muqtedar Khan, and Saba Marnoud). As we engage with these works, emphasis will be placed on developing your own interpretations and analyses, making sense of them in the historical contexts in which they are written, and reflecting on how these writers’ ideas connect to on-going political debates and challenges.
Style: 50% Lecture, 35% Discussion, 15% Small Group Activities;
Grading: 55% reports/papers, 35% quizzes, 10% other evaluation. 10% of grade in-class small group discussion exercises
Exam Format: 2 in-class quizzes are short critical response essays focused on analyzing course readings

POL 1905 Freshman Seminar: Read the Constitution
3 credit(s);
Instructor: Soper, Paul W
Description: Student may contact the instructor or department for information.

POL 1905 Freshman Seminar: Islam and Democracy
3 credit(s);
Instructor: Collins, Kathleen A
Description: Student may contact the instructor or department for information.

POL 3080 Faculty-Supervised Individual Internships
A-F only, 3-13 credit(s), max credits 15, 3 completions allowed; prereq instr consent, dept consent;
Instructor: Soper, Paul W
Description: Students working in political or governmental internships may receive credit for academic work completed in association with their internship work. Students may receive 1 credit for every 3 hours (per week) of internship work. Academic work increases with increased hours worked. Assignments will include: weekly journal, 5-7 page essay, 10 page research paper. Acceptable internships include: US Congress, MN state legislature, federal, state, and local gov’t agencies, as well as political parties, campaign organizations, and non-governmental advocacy groups. To enroll in this course, students must first arrange their internship, and then contact the instructor before the end of the second week of the semester. Students who do not contact the instructor before the end of the second week of the semester will NOT be enrolled in this course.
Style: Fieldwork/Participant-observation

POL 3085 Quantitative Analysis in Political Science
A-F only, 4 credit(s); Meets CLE req of Mathematical Thinking;
Instructor: Treier, Shawn A
Description: This course serves as an upper-level undergraduate introduction to how political scientists conduct empirical research to study political behavior and institutions. The objective of the course is to teach students how to interpret political phenomena from a systematic and analytical perspective. We consider issues of research design, hypothesis formulation, as well as study basic statistical techniques and analyze political science data. After completion of the course, students will be able to interpret data analyses presented in newspapers, magazines and basic government and academic studies. Students will also be prepared to conduct an empirical senior paper or honors thesis.

POL 3251 Greeks, Romans, and Christians: Ancient and Medieval Political Thought
3-4 credit(s), max credits 4, 1 completion allowed; prereq: POL 5251; Credit will not be granted if credit has been received for: POL 5251;
Instructor: Vazquez-Arroyo, Antonio Y
Description: This course will provide students with an introduction to Greek, Roman, and early Medieval political thought. The revolts and reforms that gave birth to democracy, a new political experience, in the fifth century BCE in Athens also led to the consequent development of systematic political theorizing. The Greeks reflected on their new political experience in a variety of genres and modes of discourse. The same could be said, albeit to a lesser degree, about the Romans and Medieval thinkers in relation to their respective milieus. In this course we will examine some of the basic concepts emerging in the ancient polis - democracy, constitutions, justice, equality, and authority, as well as other themes that defined this experience, such as the tensions associated with the distinctions between demos and the elite, ethics and politics, and war - and how these travel into the medieval world, along with their different transformations in different spatial configurations and historical moments. Accordingly, we will read selections from Thucydides' The Peloponnesian War, Aeschylus' Oresteia, Plato's Republic, Aristotle's Politics, Cicero's The Republic and the Laws, selections from Livy's Annales, as well as selections from Christian and non-Christian Medieval thinkers.

POL 3308 Congressional Politics and Institutions
3 credit(s); Credit will not be granted if credit has been received for: POL 4308; Meets CLE req of Social Sciences;
Instructor: Pearson, Kathryn Lynn
Description: This course is a comprehensive survey of the contemporary U.S. Congress. We will begin by analyzing congressional elections, how members of Congress represent their states and districts, and the links between elections and governance. The course will then focus on the organization of Congress, including the interplay between parties and the committee system. We will then analyze the legislative process, rules and procedure, the budget process, interest groups, and the interaction between the Congress and the White House. In the 2008 elections, Democrats won the presidency and increased their majorities in both the House and Senate. This political and electoral context sets the stage for our study of the U.S. Congress, but as we will discover, it is not a guarantee of automatic success for Democrats' policy proposals. We will investigate the implications of the new Republican House majority in the 112th Congress. Class sessions will include lecture and discussion. It is important that students keep up with the assigned reading to understand the lectures and participate in class. Although attention to current congressional politics will enhance the value of this course, it is no substitute for careful reading and classroom discussion. Students will write two short papers, an 8-10 page paper, and take a midterm and a final exam.
POL 3410 Topics in Comparative Politics  
3 credit(s), max credits 9, 3 completions allowed;  
Instructor: Ansell,Benjamin William  
Description: In the United States today, the gap in incomes between rich and poor, indeed the gap in incomes between the top one percent of the population and those at the 95th percentile (between the super rich and the affluent) as higher than at any time since the Wall Street Crash. Inequality is increasing not just in income but in the value of Americans’ assets, their health, their education, and their health. Whether this is a fair and natural outcome of free markets or a sign of a developing “oligarchy” is a matter of much heated debate but it is perhaps the most fundamental change in American life over the last half century. At the same time, many European countries like England and Ireland have seen a massive surge in inequality, whereas others like Sweden and Germany have witnessed little change. In some ways America and Europe are growing apart; in other ways they are becoming more alike. On top of these changes in the industrial world, the rise of new global economic powers like China and India is reshaping the global distribution of income and wealth, often in ways that undermine or bolster the welfare of different Americans and Europeans. This class is intended to help you understand the causes and consequences of economic inequality in the USA and Europe. The class is explicitly comparative? we will address both America and European countries is contrast to one another, with our aim being to understand what differences there are and whether they matter.  
Grading: 35% mid exam, 67% final exam.

POL 3410 Topics in Comparative Politics  
3 credit(s), max credits 9, 3 completions allowed;  
Instructor: Ansell,Benjamin William  
Description: This class introduces students to the theories of economics and politics that underlie debates between politicians and commentators in modern life. We begin by learning about the classic debates among economists and political scientists about the role of government in the market before moving to apply these theories to three important contemporary debates: the causes and response to the current financial crisis, what to do with the American healthcare system, and whether globalization threatens or benefits Americans. We begin by examining the history of economics, moving from Adam Smith and Karl Marx to the modern debate between Keynesian and neoclassical economics. Though these theories may seem arcane to you, they are fundamental to the current debate about the appropriate role of government and the decisions made today that will affect you over the next decades of your lives. We then turn to theories of politics to understand why politicians make particular choices in economic policy. Here we contrast rational choice theories of party behavior to theories that focus on state power to theories of culture and norms. In doing so we will discuss why political parties become successful, how they choose what policies to make, and how religion, norms, and theories of justice affect political life. We conclude by applying our theories of economics and politics to three contemporary debates: the financial crisis, the healthcare system, and the threats and opportunities of globalization.  
Style: 80% Lecture, 20% Discussion.

POL 3739 Politics of Race, Class, and Ethnicity  
3 credit(s); prereq 6 or in soc sci;  
Instructor: Nimtz Jr,August H  
Description: What similarities are there, if any, between the conflicts in the former Yugoslavia, South Africa, Northern Ireland, Rwanda, and Palestine/Israel? Why does racial and ethnic conflict persist in so many regions of the world? To what extent does racial conflict in th U.S. reflect the increasing disparities in wealth? How is racial/ethnic oppression similar and different from sexual oppression? These are some of the questions that this course will address and attempt to answer. This will be done primarily through a comparative analysis of racial/ethnic/class conflict in the U.S., South Africa, and Cuba with particular attention on the experiences of Blacks in the three countries.  
Style: 75% Lecture, 25% Discussion.  
Grading: 25% mid exam, 50% final exam, 25% reports/papers.  
Exam Format: Essay.

POL 3766 Political Psychology of Mass Behavior  
3 credit(s); Meets CLE req of Social Sciences;  
Instructor: Miller,Joanne Marie  
Description: This course will provide an introduction to the interdisciplinary field of political psychology. We will use theories and findings from both political science (particularly in the areas of public opinion and political behavior) and psychology (particularly in the areas of social psychology and personality) to better understand politics, with a special focus on understanding ordinary citizens’ political attitudes and behaviors. Students do not have to have prior coursework in both political science and psychology for this class. However, prior coursework in one of the two fields (especially in the areas mentioned above) is recommended.  
Style: 80% Lecture, 20% Discussion.  
Grading: 25% mid exam, 25% final exam, 30% reports/papers, 10% attendance, 10% other evaluation.

POL 3935 International Relations  
3 credit(s); Meets CLE req of Global Perspectives; Meets CLE req of Social Sciences;  
Instructor: Duvall,Raymond D  
Description: This course is organized in three units: We begin the course with a unit on the question whether and how a world of stable, peaceful, and equitable international politics is coming into being? Can we speak sensibly of progress toward an international community based on international law? In what ways and to what effect, for example, is international politics premised on the universality of human rights? Can we foresee an effective international regime for the environment? The second unit concerns the crucial distinction between international and domestic politics? For that, we focus on the anarchic context of international politics to examine how the absence of authority and rule above states shapes insecurities and struggles for power. In this unit, we analyze how states play out the implications of the anarchic context in their political interactions of security, violence, and war, including the contemporary international politics of “terrorism”. Whether international politics is understood differently if the systemic context is viewed as hierarchical rather than anarchical is the concern of the third unit. Here we ask whether and in what senses one can appropriately speak of empire as contemporary structure of international politics. How are imperial relations and other forms of hierarchy best analyzed? What is the significance of globalization and localised political movements for international politics? The principal objective of this course is for students to develop an appreciation of the ways in which various theoretical
perspectives lead to different understandings of the structures and practices of world politics. Each of the perspectives that we address accepts the assumption that the many and varied interactions among states and non-state actors in the global arena are vital elements of our world. However, in interpreting these many and varied forms of world politics, each of the theories offers not only a unique accounting of why international relations take the form that they do, but also distinct guidance about what international political activity should be. Therefore, we investigate both the explanatory insights and the practical and normative political implications that distinguish each theoretical perspective. Through the highlighting of such theoretical differences, the course is intended to provide the means for students to develop their own theoretically informed analysis of issues in contemporary international relations, such as the changing security dynamics in the Middle East and Southwest Asia, whether a war on terrorism can be won, how the proliferation of nuclear weapons and other ‘weapons of mass destruction’ affects international stability or instability, the extent to which cooperation on global climate change, human rights, or poverty alleviation is possible, and in what ways the functioning of the global economy shapes the terms and conditions of international politics.

Style: 65% Lecture, 5% Film/Video, 25% Discussion, 5% Small Group Activities. students do a few in-class writing assignments, or quizzes

Grading: 30% final exam, 55% reports/papers, 15% quizzes. two analytical papers, six pages each. Each worth 30% of total grade, but lower grade is reduced to count only 25% (for a total of 55% for the two papers)

Exam Format: take-home, essay format

POL 4275 Contemporary Political Thought
3 credit(s); prereq 1201 recommended; Instructor: Luxon, Nancy

Description: Violence, Sex, Money, and Race: Political theory from the early 20th century onwards faces challenges in framing the conflicts and contestations that define contemporary politics. Drawing on the theoretical frameworks offered by Judith Shklar, Isaiah Berlin, Michel Foucault, Jurgen Habermas, and Charles Taylor, this course will explore contemporary problems of political violence, sex, money, and race. The first weeks of the course will explore three models for politics: the politics of liberties (that defines politics as protection from government intrusion), the politics of discipline (that defines politics as relations of power and asymmetry), and the politics of recognition (that defines politics as a site of dignity and respect). Readings and class discussion will then consider how these theories differently help us to understand: the political violence of torture; gender, sexuality, and domestic violence; crime, punishment, and modern prisons; and finally, race relations in America. Class discussions will move consistently between political theories and current political events. Further readings will include works by Hannah Arendt, WEB Du Bois, Judith Butler, Antonio Negri and others.

Style: 60% Lecture, 40% Discussion.

Grading: 55% reports/papers, 35% reflection paper, 10% class participation.

POL 4310 Topics in American Politics: Law, Sovereignty, & Treaty Rights
3 credit(s), max credits 9, 3 completions allowed; prereq 1001 or equiv or instr consent; Instructor: Wilkins, David E

Description: Student may contact the instructor or department for information.

POL 4315W State Governments: Laboratories of Democracy
4 credit(s); prereq 1001 or equiv, non-pol sci grad major or instr consent; Credit will not be granted if credit has been received for: POL 5315; Meets CLE req of Writing Intensive; Instructor: Karch, Andrew Jonathan

Description: Student may contact the instructor or department for information.

POL 4410 Topics in Comparative Politics
3 credit(s), max credits 6; Instructor: Samuels, David Julian

Description: Student may contact the instructor or department for information.

POL 4463 The Cuban Revolution Through the Words of Cuban Revolutionaries
3 credit(s); prereq 1025 or 1054 or equiv or instr consent; Meets CLE req of Global Perspectives; Instructor: Nimtz Jr, August H

Description: The history of socialist revolutions over the course of a century or more reveals that what occurred in Cuba has proven to have more lasting power. In spite of all the challenges it continues to face, what explains why the Cuban Revolution is still in place after four decades? This is the central research question of the course. A definitive answer would require a thorough examination of the revolution from its initiation until today, which is beyond what can be done in a semester or its equivalent. The focus, rather, will be more limited. First, how was the revolution made and consolidated, from 1953 until about 1969. Second, how has it been able to survive and advance since the collapse of the Soviet Union, that is, since 1991? The emphasis here is on the role of leadership and strategy and how the Cubans and their leaders saw and see what they are doing, in their own words. This is an attempt to get into their heads, their understandings, through documents, speeches and writings. For the first question I will also draw on the data from a research/film documentary project that I’m involved in at this moment: the participation of women and men in the guerrilla army and underground movement.

POL 4473W Chinese Politics
3 credit(s); Credit will not be granted if credit has been received for: EAS 4473; Meets CLE req of Global Perspectives; meets CLE req of Writing Intensive; Instructor: Kelliher, Daniel R

Description: Don't know anything about China? Like, say, zero? No problem: no background required here. This course starts from scratch, going high-speed through Imperial China and the Chinese Revolution to arrive at the contemporary scene (the focus for most of the course). We'll cover Chinese social structure plus the basics of China's long history of sophisticated political theory, and then see how they both play out in the biggest controversies today: environmental catastrophe, internet censorship, changing sexual morals, international copyright piracy, sex-selective abortion & the missing girls problem, freedom & human rights, changing roles for women and men, corruption & high-profile scandals, tainted food and medicine, religion, grass-roots protest movements, art & cinema, business & Chinese capitalism, the military, espionage, and U.S.-China relations (with an emphasis on what American behavior looks like to the Chinese). Feedback I've gotten from students about this class: it's hard and it's really fun.

Style: 60% Lecture, 10% Film/Video, 20% Discussion, 10% Small Group Activities.

Grading: 15% mid exam, 15% final exam, 50% reports/papers, 20% class participation.

POL 4485 Human Rights and Democracy in the World
3 credit(s); prereq At least one 1xxx or 3xxx course in pol sci, non-pol sci major or instr consent; Credit will not be granted if credit has been received for: POL 5485; Meets CLE req of Civic Life and Ethics; Instructor: Sikkink, Kathryn A

Description: This class will examine the question of international human rights in theory and in practice. We will begin by studying the history of the idea of human rights and the basic human rights treaties and declarations. Next we will explore theoretical explanations for repression and human rights violations, contrasting explanations that focus on economic, political, psychological, and ideological factors. We will devote particular attention to causes of genocide, and look at what other countries might do to prevent future genocide. Each student will be asked to choose and focus on one or two countries that provides cases of repression and human rights violations. In the third part of the class, we will explore how human rights...
violations could be prevented and what individuals can do to improve human rights situations. In this part of the course, we will examine issues of transitional justice and accountability for past human rights abuses. Do Truth Commissions and trials of leaders for human rights violations help avoid future repression? 

Style: 45% Lecture, 35% Discussion.  
Grading: 25% mid exam, 25% final exam, 40% reports/papers, 10% class participation.  
Exam Format: essay, short answer, and multiple choice

**POL 4489W Citizens, Consumers, and Corporations**  
3 credit(s); Meets CLE req of Civic Life and Ethics; meets CLE req of Writing Intensive;  
**Instructor:** Caraway, Teri L.  
**Description:** Corporations are among the most powerful actors in the global political economy. They employ millions of people, produce a variety of goods, and have massive effects on the ecological and social environments in which they do business. How do ordinary people act in order to hold corporations accountable for the effects that their activities have on communities and individuals? This course focuses on two ways that people have mobilized to counter corporate power--as citizens and as consumers. When people mobilize as citizens, they put pressure on corporations through the political system--e.g. through mass protests, lobbying politicians, and pursuing claims through the courts. When people mobilize as consumers, they use the power of their purchasing decisions to encourage corporations to change their behavior. We will explore these different modes of action through an examination of Wal-mart, branding and corporate social responsibility, labor rights, the environment, fair trade, water privatization, the privatization of life, and outsourcing war.  

Style: 40% Lecture, 15% Film/Video, 30% Discussion, 15% Small Group Activities.  
Grading: 20% final exam, 60% reports/papers, 20% class participation. Students will write two short essays of 4-5 pages and one research paper, 6-8 pages in length.  
Exam Format: The final exam will be an essay exam in which students will answer one question from a list of two or three questions.

**POL 4501W The Supreme Court and Constitutional Interpretation**  
3 credit(s); Credit will not be granted if credit has been received for: POL 5487; Meets CLE req of Civic Life and Ethics; meets CLE req of Writing Intensive;  
**Instructor:** Johnson, Timothy Russell  
**Description:** This course is designed to introduce students to constitutional law, with an emphasis on the U.S. Supreme Court’s interpretation of Articles I, II, and III.  

Style: 50% Lecture, 50% Discussion.  
Grading: 33% mid exam, 33% final exam, 33% reports/papers.

**POL 4771 Racial Attitudes and Intergroup Conflict**  
3 credit(s);  
**Instructor:** STAFF  
**Description:** This course will focus on critical comparative perspectives on race and ethnicity. Because race and ethnicity function differently in various parts of the world, it is instructive to consider questions of recognition, inclusion, equality and democracy through the comparative method. The first part of the course considers the similarities and differences between racial and ethnic identities. Historical patterns of inequality, economic relations and political institutions all interact and structure the way in which racial and ethnic diversity is managed and manipulated in different contexts. Key cases will highlight the way in which race and ethnicity serve as systems of stratification, as well as the various models of inter-group conflict resolution which have been tried throughout the world (cases will include US, Brazil, South Africa, Ethiopia, China, Australia, Iraq, France). Through case studies, films and popular news media, students will be asked to think globally and comparatively about inequality based on race and ethnicity. Finally, institutional and local solutions, in both national and international policy, will be considered.  

Style: 80% Lecture, 20% Discussion.  
Grading: 30% mid exam, 35% final exam, 25% reports/papers, 10% class participation.  
Exam Format: Short answers and essays

**POL 4878W Israeli-Palestinian Situation**  
4 credit(s); Meets CLE req of Global Perspectives; meets CLE req of Writing Intensive;  
**Instructor:** Sampson III, Martin Wright  
**Description:** Examines the issue in its familiar Israeli vs Palestinians mode, looking at each side’s basic narrative and the historical and political factors surrounding those narratives. The course also draws on recent literature from both communities that challenges the basic narrative of the writer’s own community. Some attention is paid to political-psychological ideas about conflict and reconciliation. Most of the assigned reading is by Israelis or Palestinians. The six books assigned in Spring 10 cost approximately $115 from Amazon.com. The Fall ‘10 readings may differ based on student evaluation of the spring readings and newly available books and articles. Writing activities early in the course support (a) student thinking about the subject and (b) student development of the required paper. The course writing portfolio meets the Department of Political Science major project requirement.  

Style: 60% Lecture, 20% Discussion, 20% Small Group Activities.  
Grading: 20% mid exam, 30% final exam, 40% reports/papers, 10% other evaluation.  
Exam Format: A study guide appears a week before the exam or the test date. The test and the exam include a choice of short questions and a large essay. The guide includes possible essay questions, of which one appears on the test and one or two on the final exam.

**POL 4887 Thinking Strategically in International Politics**  
A-F only, 3 credit(s);  
**Instructor:** STAFF  
**Description:** This course surveys current theories of international relations, and introduces students to elementary game theory. Major topics include the causes of war, the conditions for international cooperation, and the role of international institutions. By the end of the semester, students will be expected to: 1. Understand the relevant international relations literature; 2. Understand simple game-theoretic techniques; 3. Critically analyze theories of international politics; and 4. Understand the general scientific method of theory building and empirical testing. Possible textbooks: Kenneth N. Waltz. 1954. Man, the State, and War; Waltz, Kenneth N. Theory of International Politics; Bruce Bueno de Mesquita, 2000. Principles of International Politics.  

Style: Lectures and discussions after each homework is graded.  
Grading: 30% mid exam, 40% final exam, 10% class participation, 20% other evaluation.  
Exam Format: Multiple choice, essay, and short answer.  

**POL 4900W Senior Paper**  
A-F only, 1 credit(s); prereq Pol sr, instr consent; Meets CLE req of Writing Intensive;  
**Instructor:** STAFF  
**Description:** Can be attached to any 3XXX or 4XXX course (with the instructor’s agreement). A 10–15 page paper is submitted for evaluation/advice by instructor, then revised for final submission.  

Grading: 100% reports/papers.  
Exam Format: None

**POL 5315 State Governments: Laboratories of Democracy**  
4 credit(s); prereq grad student or instr consent; Credit will not be granted if credit has been received for: POL 4315W;  
**Instructor:** Karch, Andrew Jonathan  
**Description:** Student may contact the instructor or department for information.

**POL 5410 Topics in Comparative Politics**  
3 credit(s); prereq grad student;  
**Instructor:** Samuels, David Julian  
**Description:** This course also draws on recent literature from both communities that challenges the basic narrative of the writer’s own community. Some attention is paid to political-psychological ideas about conflict and reconciliation. Most of the assigned reading is by Israelis or Palestinians. The six books assigned in Spring 10 cost approximately $115 from Amazon.com. The Fall ‘10 readings may differ based on student evaluation of the spring readings and newly available books and articles. Writing activities early in the course support (a) student thinking about the subject and (b) student development of the required paper. The course writing portfolio meets the Department of Political Science major project requirement.  

Style: 60% Lecture, 20% Discussion, 20% Small Group Activities.  
Grading: 20% mid exam, 30% final exam, 40% reports/papers, 10% other evaluation.  
Exam Format: A study guide appears a week before the exam or the test date. The test and the exam include a choice of short questions and a large essay. The guide includes possible essay questions, of which one appears on the test and one or two on the final exam.
Description: Student may contact the instructor or department for information.

**POL 5465 Southeast Asian Politics**
3 credit(s);
Instructor: Caraway, Teri L.
Description: Composed of eleven countries, Southeast Asia covers a wide geographical region stretching from India to China. With a rich endowment of natural resources, a dynamic manufacturing base, and a strategic location on China's southern flank, the region has come to play an increasingly important role in the political and economic affairs of the globe. Culturally and ethnically diverse, hundreds of languages are spoken in the region, and the religions practiced include Buddhism, Catholocism, Hinduism, and Islam. All of the countries in Southeast Asia have exclusionary political systems, but they range from the formally democratic through civilian authoritarianism to military authoritarianism. Because the region is so diverse, the introduction must necessarily be incomplete.

Readings and lectures will focus on seven countries: Burma, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. The course centers on three main themes: comparing the countries in the region with respect to political change and political systems, the Vietnam War, and counter-terrorism since 9/11. By the end of the course, students will have a better understanding of politics in the region and acquire theoretical tools for analyzing politics there.

Style: 30% Lecture, 20% Film/Video, 30% Discussion, 20% Small Group Activities.
Grading: 29% mid exam, 29% final exam, 29% reports/papers, 13% class participation. I use a point system, with 100 points each for the midterm, final, and research paper and 50 points for class participation.

**POL 5485 Human Rights and Democracy in the World**
3 credit(s); prereq grad student or instr consent; Credit will not be granted if credit has been received for: POL 4485;
Instructor: Slikkin, Kathryn A
Description: Student may contact the instructor or department for information.

**POL 8101 Introduction to Political Science**
A-F only, 3 credit(s), max credits 4, 1 completion allowed; prereq Grad pol sci major or instr consent;
Instructor: Samuels, David Julian
Description: Student may contact the instructor or department for information.

**POL 8127 Survey Research Methods: Measuring Public Opinion**
3 credit(s); prereq Pol sci grad major;
Instructor: Miller, Joanne Marie
Description: This course offers a review of some of the major theoretical and empirical issues associated with survey research methodology (including questionnaire design and scientific sampling) and prepares students in the fundamental skill areas necessary to design and conduct survey research projects. Course requirements include regular attendance and participation in the weekly seminars, preparation for seminars by completing the readings, working with other students in groups outside of the seminar to prepare for class assignments, and a final examination. The course is designed so that anyone who concentrates on the work at hand can do well. Falling behind is not a good idea, as each class session builds on what you have learned before. It is particularly important to stay on top of the weekly readings.

Style: 70% Lecture, 30% Discussion.
Grading: 40% final exam, 60% reports/papers.

**POL 8160 Topics in Models and Methods: Probability and Statistics**
1-3 credit(s), max credits 12, 4 completions allowed; prereq Grad pol sci major or instr consent;
Instructor: Goren, Paul Nurullah
Description: Student may contact the instructor or department for information.

**POL 8160 Topics in Models and Methods: Maximum Likelihood Estimation**
1-3 credit(s), max credits 12, 4 completions allowed; prereq Grad pol sci major or instr consent;
Instructor: Treier, Shawn A
Description: Student may contact the instructor or department for information.

**POL 8235 Democratic Theory**
3 credit(s); prereq Grad pol sci major or instr consent;
Instructor: Beaumont, Elizabeth
Description: This graduate seminar will focus on a set of critical debates over the meaning and practice of democracy and the political hopes and fears it inspires: Can democratic self-rule be practiced in large, complex societies? Who or what is included in core democratic concepts and ideals such as? the people?, ?popular sovereignty?, and ?the common good? and what and whom do such notions assume and exclude? What is the relationship between democracy and equality? Between democracy and liberty? What is the appropriate role for citizens? For political elites and experts? How should democracy address differences, pluralism, and conflict? Do rights and constitutional limits check democracy or provide its basic foundations? Is democracy primarily a type of regime or system of governance, or should it be understood as a set of principles and/or practices or ?ways of life? -- of popular sovereignty, rational communication and deliberation, contestation, constraint on tyranny, or opposition to domination? Does democracy depend primarily on particular values or ground rules or on processes that legitimate decision-making? What are the recurring crises and new challenges facing democracy and how might these be addressed? To explore these and other questions, we will focus on a set of important works of historical and contemporary democratic theory. We will begin with a brief examination of some important roots of democratic theories before turning to more modern texts and topics such as the possibilities and limits of popular participation, the politics of group representation and pluralism, the rise of deliberative democracy, radical critiques and reformulations of democracy, and the relationship of democracy to crises, war and globalism. To explore these and other questions, we will focus on a set of important works of historical and contemporary democratic theory. We will begin with a brief examination of some important roots of democratic theories before turning to more modern texts and topics such as the possibilities and limits of popular participation, the politics of group representation and pluralism, the rise of deliberative democracy, radical critiques and reformulations of democracy, and the relationship of democracy to crises, war and globalism.

**POL 8253 Late Modern Political Thought**
3 credit(s); prereq Grad pol sci major or instr consent;
Instructor: Luxon, Nancy
Description: Modernity and its Discontents surveys European political theory of the 19th century, and concentrates on the emergence of capitalism and the liberal state as well as the challenges, alienation and discontent that develop alongside each. With these two historical developments in mind, this course will trace three themes. Central to capitalism and the liberal state both, is the ideal of individuality. To develop our analysis of individuality as an ideal, we will ask, what are the characteristics that define (or ought to define) individuals? What are the terms on which individuals develop themselves and in pursuit of which political, economic, or ethical goals? Second, we will analyze theories of emancipation and freedom. Even as the 19th century witnesses an extension of voting rights to increasing numbers of people, and even as political liberties appear more democratically accessible, thinkers struggle to define the scope and nature of these liberties. What kinds of...
political institutions and recognition best permit individuals to express themselves as citizens? and what are the psychological, economic, or political obstacles that might impede this expression? Third, political expression implies knowledge: an ability to analyze one's context and to determine what is to be done. Alongside the thinkers of the period, we will consider the kind of information about the world that is necessary in order to act in? and perhaps transform? one's immediate context and longed-for future. Readings for the course include Hegel, Marx, Toqueville, Mill, Nietzsche, Freud, and Weber.

Style: 100% Discussion.
Grading: 100% reports/papers.

POL 8301 American Politics
3 credit(s); max credits 4, 1 completion allowed; prereq Grad pol sci major or instr consent; Instructor: Abernathy, Scott F.
Description: Student may contact the instructor or department for information.

POL 8302 Public Opinion and Political Participation
3 credit(s); prereq Grad pol sci major or instr consent; Instructor: Goren, Paul Nurullah
Description: Student may contact the instructor or department for information.

POL 8307 Proseminar in Political Psychology I
S-N only, 1 credit(s); prereq Grad pol sci major or pol psych minor or instr consent; Credit will not be granted if credit has been received for: PSY 8211; Instructor: Goren, Paul Nurullah
Description: Student may contact the instructor or department for information.

POL 8311 Political Psychology and Socialization
A-F only, 3 credit(s); prereq Grad pol sci major or pol psych minor or instr consent; Instructor: Sullivan, John L.
Description: Student may contact the instructor or department for information.

PORT 3502W Foundations of Brazilian Literature and Culture
3 credit(s); prereq 3003 or equiv; Credit will not be granted if credit has been received for: PSY 8211; Instructor: Krebs, Ronald R.
Description: Student may contact the instructor or department for information.

PORT 3001 Portuguese for Spanish Speakers
5 credit(s); Instructor: STAFF
Description: Study of Portuguese based on student knowledge of Spanish (speakers of other Romance languages are allowed with instructor permission). Contrastive approach to the phonic and morpho-syntactic structures of Portuguese. Cultural components will focus on Brazil, Portugal, and/or Portuguese-speaking Africa.
Style: 20% Lecture, 60% Discussion. in-class writing
Grading: 15% mid exam, 20% final exam, 20% reports/papers, 10% quizzes, 15% in-class presentation, 20% class participation.

PORT 3003 Portuguese Conversation and Composition
4 credit(s); Instructor: STAFF
Description: This course will focus on grammar review through practical activities in order to encourage conversation. There will also be readings, films/videos, and discussions that will center on Brazilian and/or Portuguese, and/or Lusophone African cultures. The main objective is for students to improve all four language skills (comprehension, reading, speaking, and writing).

PORT 3502W Foundations of Brazilian Literature and Culture
3 credit(s); Instructor: STAFF
Description: This course will offer an introduction to Brazilian culture, history, and politics, as seen primarily through key literary, filmic, and popular musical texts. We will focus on the time period immediately after the arrival of the Portuguese royal family to Brazil in 1808 until today, a time when globalization is re-defining territorial, economic, and political borders, while the mass media plays a powerful homogenizing role from a cultural standpoint. Through novels, short stories, poetry, feature films, documentaries, TV series, and songs we will sort through the main themes that will be explored, namely: national identity,
authoritarianism, the role of women, social exclusion, dictatorship, and modernization.

**Style:** 40% Lecture, 20% Film/Video, 40% Discussion.

**Grading:** 60% reports/papers, 40% class participation.

**PORT 3800 Film Studies in Portuguese**

**A-F only, 3 credits**, max credits 6, 3 completions allowed; prereq 3003 or [dept or instr consent]; Credit will not be granted if credit has been received for: PORT 3800H;

**Instructor:** Arenas, Fernando

**Description:** Popular Music in the Portuguese-Speaking World? This course is an introduction to the popular music of Brazil, Portugal, Cape Verde, and Angola. We will study the emergence of contemporary popular music in a variety of forms while paying close attention to the specific historical, socio-cultural, and political forces that have shaped its formation in these specific countries. Furthermore, we will explore the impact of globalization on national popular music forms throughout the Portuguese-speaking world and their respective contributions to transnational genres such as jazz, ?latin music,? and "world music." Our analytical focus will be centered on poetry and song lyrics, musical form (melody, rhythm, instruments, sources of influence), as well as social context and the political economy of popular music dissemination (nationally and internationally). The following will be some of the main musical forms studied throughout this course: Brazil (samba, bossa nova, and MPB); Portugal (fado); Cape Verde (morna, koliadera, funana, batuku); and Angola (semba, kuduro). Class sessions will be organized around lectures, discussion, music listening, and film viewing. The course will be taught entirely in Portuguese.

**Style:** 50% Lecture, 10% Film/Video, 40% Discussion.

**Grading:** 60% reports/papers, 40% class participation.

**PORT 5910 Topics in Lusophone Cultures and Literatures**

**3 credits**, max credits 9, 3 completions allowed; 

**Instructor:** Ferreira, Ana Paula

**Description:** TOPIC: Reading 'Race' and Racisms in Portuguese Despite the pervasiveness of 'race' and despite representations of racism in the Portuguese and Brazilian literary traditions, with which the more recent Lusophone African literatures may be grouped in the colonial-postcolonial continuum, it has been "little less than a heresy" (Russell Hamilton) to invoke 'race' in the context of Portuguese-speaking cultures. This is all the more so in the case of Portugal and Lusophone Africa, where the study of 'race' and racisms in regard to literature continues to be a taboo, one even more difficult to breach than are non normative sexualities. This course aims to denaturalize the "convenient" silence surrounding the topic in the literary-critical context, taking the Portuguese language itself to be the extant remnant of empire as well as the traumatic reminder of its manifold violations, with racism as its base. We will focus on several intertwined areas of racial inscription or, as the case may be, of racist foreclosure in 20th century cultures of Portuguese expression. The latest of these is the multiculturalist concept of Lusofonia, from which the term "Lusophone" ensues. The central one is "Luso-tropicalism"; we will survey its different historical articulations, political uses and critiques. The "common sense" of miscenegation is the third cultural problematic calling for the tracking down of 'race' and racisms. Finally, we will consider discourses of national identity that have supported myths of national-exceptionalism. We will go over two sets of primary texts: literature and cultural, anthropological, sociological and historiographical essays. Secondary texts are of two kinds: the first and arguably more important for the purposes of this course pertains to race critical theory; the second are studies referring to either the literary texts or to the cultural problematic of Lusofonia. Lusotropicalism, Race and Miscenegation, and Identity. Students are expected to participate in the discussion of primary and secondary texts; outline the relevance of key theoretical texts; prepare an annotated bibliography; and write an original research paper of no less than 15 double-spaced pages, accompanied by a short 1-2 page summary to be circulated among the group. Oral presentations of research papers followed by discussion will take place during the last two weeks of class.

**PORT 5970 Directed Readings**

**3 credits**, max credits 9, 3 completions allowed; prereq MA or PhD candidate, instr consent, dept consent, college consent;

**Instructor:** STAFF

**Description:** Lusophone Studies (Portuguese-speaking Africa, Brazil and Portugal) Thematic areas not covered in other courses. Students submit reading plans for particular topics, figures, periods or issues.

**PORT 5990 Directed Research**

**1-4 credits**, max credits 9, 9 completions allowed; prereq instr consent, dept consent, college consent;

**Instructor:** Ferreira, Ana Paula

**Description:** Student may contact the instructor or department for information.

**PORT 5990 Directed Research**

**1-4 credits**, max credits 9, 9 completions allowed; prereq instr consent, dept consent, college consent;

**Instructor:** Ferreira, Ana Paula

**Description:** Student may contact the instructor or department for information.
You will be on the computer 70% of each class period. The rest of the time you will be working on algebra problems, taking exams, and working individually with the instructor. This course is not self-paced; you must follow a set schedule for class points, homework, and exams. Course covers concepts and procedures of intermediate algebra at a level of difficulty and abstraction geared for students enrolled at a research university. To be successful you must enter the course being able to work with expressions, equations, exponents, polynomials, factoring, rational expressions and equations, and graphs. Course content includes roots, radicals, linear, quadratic, exponential, and logarithmic functions, and word problems. Hourly time commitment per week: Class: 4, Reading: 1, Writing: 0, Studying: 2, Homework: 6. Homework assignments ask you to work 10-40 problems each class day. Testing includes daily mini-quizzes, four 50 minute closed-book exams and a two hour comprehensive final. Calculators are allowed. Course prepares you for Math 1031 College Algebra or Math 1051 Precalculus I, as well as PsTL 1004 Statistics and PsTL 1006 Mathematical Modeling and Prediction (all of which satisfy the CLE Mathematical Thinking requirement).

Style: 30% Discussion, 70% Web-based. Computer-mediated instruction, work individually, work one-on-one with instructor.
Grading: 50% mid exam, 30% final exam, 10% quizzes, 10% written homework.
Exam Format: Exams are problem oriented (e.g., Solve this equation).

PSST 1004 Statistics
4 credit(s); prerequisite Intermediate algebra or equival or placement exam credit will not be granted if credit received for: GC 1454 or Stat 1001; Meets CLE req of Mathematical Thinking;
Instructor: Stottlemeyer PhD, Janet
Description: This course is an introduction to statistics that emphasizes problem solving and decision making through the collection, analysis, and interpretation of data. Course topics include the organization and presentation of data, summary statistics, sampling methodology, sampling distributions, probability, estimation, correlation, hypothesis testing, contingency tables, and chi-square analysis. The instructional approach includes the use of small active learning groups, computer statistics software, computer simulations, in-depth projects, writing assignments, demonstrations, and lots of discussion and problem solving based on practical examples. Students learn how to analyze and interpret quantitative information, to use statistical thinking, and to communicate using the language of statistics. Students will develop a level of statistical literacy that enables them to critically assess information encountered in the media and other sources. This course will be of particular interest to undergraduate non-majors who want to fulfill the CLE requirement in Mathematical Thinking.
Style: 40% Lecture, 9% Discussion, 50% Small Group Activities, 1% Student Presentation.
Grading: 25% reports/papers, 55% additional semester exams, 20% problem solving. The 20% of the course grade for problem solving involves course work done in the classroom - most assignments will be found in the course packet.
Exam Format: Exams are a combination of short answer questions, calculations and graphing, and multiple choice questions.

PSST 1006 Mathematical Modeling and Prediction
3 credit(s); prerequisite Three yrs high school math or grade of at least C+ in [0731 or 0732] or placement test score or instr consent; Meets CLE req of Mathematical Thinking;
Instructor: Robertson, Douglas Frederick
Description: This course is part of a learning community with geology and as such will focus on the time on specific geological data and the graphs and mathematical models associated with that subject. It is a mathematical thinking course that primarily uses mathematical models to describe real world data and demonstrate the uses of mathematical manipulations. Data are described by a mathematical model and a graphical rendering. These models are then used to make predictions. Applications of linear, polynomial, exponential and logarithmic functions will be explored. Probability will also be introduced. Students will develop algebraic and critical thinking skills while observing and analyzing the behavior of real-world data. The foundations of counting and probability will be integrated into the modeling activities. When students have successfully completed this class, they will be able to develop, select, and fine-tune equations and use probabilities to represent a wide variety of situations using real world applications and applying a model to the data with mathematics, both equations and graphs. There will be lecture, demonstrations, individual in class work, and small group work in the class.
Style: 80% Lecture, 10% Laboratory, 10% Demonstration.
Grading: 20% final exam, 40% special projects, 10% written homework, 30% additional semester exams.

PSST 1006 Mathematical Modeling and Prediction
3 credit(s); prerequisite Three yrs high school math or grade of at least C+ in [0731 or 0732] or placement test score or instr consent; Meets CLE req of Mathematical Thinking;
Instructor: Staats, Susan K
Description: Students use algebra to create equations and graphs that describe real world data and situations. Students learn to use these mathematical models to make predictions, to evaluate error and to link observed phenomena with algebraic processes. The course focuses on applications of linear, polynomial, rational, exponential, logarithmic and logistic equations. This section of 1006, students can complete about 15% of the class credit through service learning. The service learning component is optional, not required.

PSST 1051 Editing for Writers
2 credit(s); prerequisite Three yrs high school math or grade of at least C+ in [0731 or 0732] or placement test score or instr consent; Meets CLE req of Mathematical Thinking;
Instructor: Rojas Collins, Molly C
Description: 1051 is an editing class for non-native speakers of
English in which students are guided in how to analyze their writing in order to understand their own patterns of error. Explicitly focused on language.

**PSTL 1051 Editing for Writers**

2 credit(s);

**Instructor:** Fitzpatrick, Renata

**Description:** 1051 is an editing class for non-native speakers of English in which students are guided in how to analyze their writing in order to understand their own patterns of error. Explicitly focused on language and academic English. Short lectures on features of English, small group/peer activities, individual conferencing on editing needs.

**PSTL 1112 Nature in the City**

4 credit(s); prereq credit will not be granted if credit received for: GC 1112, GC 1112W; Meets CLE req of Biological Sciences; meets CLE req of Environment;

**Instructor:** Hatch, Jay Tudor

**Description:** Student may contact the instructor or department for information.

**PSTL 1131 Principles of Biological Science**

4 credit(s); Meets CLE req of Biological Sciences;

**Instructor:** Hatch, Jay Tudor

**Description:** This is a learner-centered introductory level course that guides you toward developing your own understanding of the preeminent principles of biology, including Ecology, Biodiversity, Evolution, Genetics, Cell Theory, and the Molecular Basis of Life. But, we strive to have you do so in the context of your own daily life, being ever mindful that all living things are connected in an intricate web of life, and that how you live affects the nature of that web. So, how do we begin? By asking questions and developing answers. Here’s some questions we’ll try to answer from a scientific point of view (and don’t worry, you’ll get to ask and answer your own questions as well). Who are you? Are we alone in the universe? Want to have a clone? Is there really such a thing as race? Are you only as smart as your genes? Is creationism an alternative to evolution? Is the earth warming? Are we creating a biodiversity crisis? Is social justice possible? How might a shark save my life? We will spend much of our time in the classroom working on small-group activities designed to develop answers to the questions based on what we already know (or think we do) and new knowledge that we are constructing. Sometimes there will be short (10-minute) lectures to help out with difficult concepts; and always we will take time to write about what we understand, how we came to understand it, and what we still don’t understand. In the laboratory, you will work in cooperative pairs, focused on the process of science; that is, how scientists go about observing, formulating questions, transforming the questions into hypotheses, testing the hypotheses, collecting data, organizing and interpreting the data, drawing conclusions, and communicating their work to the world. There is no dissection of organisms in this course.

**Style:** 20% Lecture, 20% Discussion, 30% Laboratory, 30% Small Group Activities.

**Grading:** 16% mid exam, 17% final exam, 16% special projects, 17% class participation, 33% laboratory evaluation. Lab scoring based on weekly quiz, lab reports, written homework, and one problem set.

**Exam Format:** Multiple choice

**PSTL 1135 Essentials of Human Anatomy and Physiology**

4 credit(s); prereq credit will not be granted if credit received for: GC 1135; Meets CLE req of Biological Sciences;

**Instructor:** Jensen, Murray Stowe

**Description:** PSTL 1135, Essentials of Human Anatomy and Physiology, is a biological science course, with laboratory, designed to introduce college freshmen to scientific thinking and career exploration in health care, kinesiology, or other areas in the life sciences. The course is organized around body systems, e.g., the respiratory system, the nervous system, etc., and uses both fitness and disease, (e.g., diabetes, cancer, atherosclerosis, etc) to introduce students to essential concepts in anatomy and physiology. In the lecture setting, students will take notes while listening to lectures, work in groups to solve problems, learn to interpret graphical data, and complete short writing assignments. In the laboratory, student engagement in traditional dissections, e.g., brains, hearts, etc., perform inquiry-based exercises, and participate in other hands-on activities. Cooperative learning activities, e.g., cooperative quizzes, are used in both the lecture and the lab settings of the course. All students enrolled in PSTL 1135 will be required to read at least one book, such as “When the Air Hits Your Brain,” outside of regular class time. The course will make considerable use of internet-based curriculum materials.

**Style:** 60% Lecture, 30% Laboratory, 10% Small Group Activities.

**Grading:** 30% final exam, 10% quizzes, 30% additional semester exams, 30% laboratory evaluation.
PSTL 1251 U.S. History: Multicultural Perspectives
4 credit(s); prereq credit will not be granted if credit already received for: GC 1231, GC 1231W; Meets CLE req of Diversity and Soc Justice US; meets CLE req of Historical Perspectives;
Instructor: Stahl, Jason Michael
Description: I have three interrelated goals for our course: to help you understand my interpretative framework for the last 150 years of U.S. History; to help you develop your own interpretative frameworks and the same subject; and to help you better understand the discipline of History and the humanities generally. My interpretative framework focuses on studying the “American Nation” rather than the United States. The simplest way to describe the difference between the two is that the United States is a specific geographic place while the American Nation is an idea—or more accurately a competing set of ideas—which seeks to bind individual human beings residing within the geographic place known as the United States. Thus, in this course we will be following historian Benedict Anderson's idea of a nation as an “imagined community.” According to Anderson, a nation "is imagined because the members of even the smallest nation will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion." These “imagined communities” of the American Nation will be our focus of study in this course. We will discuss the ways that inclusive and exclusive perspectives of the American Nation were/are in conflict over the past 150 years of American History. Given space limitation here, the other two goals will be discussed further on the first day of class. Feel free to email me for a copy of the course syllabus.
Style: 30% Lecture, 20% Film/Video, 25% Discussion, 25% Small Group Activities.
Grading: 75% reports/papers, 25% class participation. Grade is composed of: Three (2 to 3 page) Book Reviews; Two (2 to 3 page) Primary Source Response Essays; In-Class Work

PSTL 1231 U.S. History: Multicultural Perspectives
4 credit(s); prereq credit will not be granted if credit already received for: GC 1231, GC 1231W; Meets CLE req of Diversity and Soc Justice US; meets CLE req of Historical Perspectives;
Instructor: Poch, Robert Karl
Description:

PSTL 1246 Multicultural Contexts: Engaging Citizenship and Democracy
3 credit(s); Meets CLE req of Civic Life and Ethics; meets CLE req of Social Sciences;
Instructor: Peters, Gary E
Description: The Greeks defined the term ?citizen? as a person who was knowledgeable and engaged in society and politics. The central question we will explore in this course is how to be an engaged citizen in a multicultural democracy. Using multiple lenses of history, law, psychology and sociology, this course, examines the role of individuals and groups in shaping the nature of citizenship and public ethics in U.S. society. Using social science texts, historical narratives, literature, and legal cases, the course explores the nature of legal and personal responsibility with particular attention to race, class, gender and civil rights. In addition, to learn how the adversarial system works (or doesn?t work!) all students will participate in a full mock jury trial.
Style: 25% Lecture, 5% Film/Video, 25% Discussion, 20% Small Group Activities, 20% Student Presentation, 5% Guest Speakers.
Grading: 45% reports/papers, 5% quizzes, 10% written homework, 25% in-class presentation, 15% class participation.

PSTL 1251 Global History and Culture
4 credit(s); prereq credit will not be granted if credit received for: GC 1251; Meets CLE req of Global Perspectives; meets CLE req of Historical Perspectives;
Instructor: Arendale,David R
Description: This Course Fullfills Two Graduation Requirements: CLE: Diversity/Culture; Historical Perspectives CLE Designated Theme: International Perspectives Textbook: None. Use free online articles Course Overview World History and Culture examines the 20th and 21st centuries to examine profound and enduring ideas that influenced development of global, political, social, and economic systems. This course explores world civilizations by placing historical events, customs and cultures in a global context. Use of historical documents, computer resources, historical simulations, texts, film documentaries, small group discussions, and lecture presentations are create a comprehensive view of the major world cultures. This course provides a balanced view of world history over the past 100 years. The course develops major concepts such as nationalism, democracy, colonialism, liberalism, socialism, communism, and fascism while tracing their impact on Europe, Asia, Africa, and the Americas. Major questions explored include: What are the forces that guide history as it unfolds? How do today's news headlines connect with the past? Is it possible to predict the near future and make personal plans as a result? Exploring these questions helps to make sense out of history and connect "then and now." Current events such as ethnic conflicts, the breakup of the Soviet Union, the modernization of Japan, China, and India, Arab/Israel disputes, nation building in Africa, neo-colonialism and trade dependence in developing countries make sense when the past is explored and connections made with the present. Technology: Like many other courses at the University, WebVista is an important Internet tool that serves as a companion to the course. Utilizing the features of WebVista will allow accessing of critical course materials (study guides, lecture outlines, information links). An additional feature of this course is integrating the use of blogs, wikis, and podcasting into the course. As a class we will construct a weekly audio podcast that features a review of the history topics as well as include music selected by students. Check out the podcast at http://thenandnow.org It can be subscribed through iTunes. You can also sample the podcast by clicking on the web link on that web page. Also, the class will construct online its own study guide for the major exams. Check out the website at http://myworldhistory.net Final Words History is all around us. We observe it as well as help to create it. The only way to study history is to hold a history textbook in one hand and today's newspaper in the other. This class is about creating connections among the textbook and today's newspaper headlines. It is about making sense out of a world that sometimes seems not to make very much sense at all. I hope that you decide to join us in the class.
Style: 60% Lecture, 10% Film/Video, 15% Discussion, 10% Small Group Activities, 2% Field Trips, 3% Web Based.
Grading: 20% mid exam, 20% final exam, 10% reports/papers, 10% special projects, 10% quizzes. 20% additional semester exams, 5% reflection paper, 5% class participation. Study guides for major exams created by students in the class and also provided by the course instructor. Also the course instructor and the enrolled students coproduce a weekly podcast that reviews the textbook chapter and class lectures.
Exam Format: Major exams have three parts: matching vocabulary, multiple choice, and essay questions.

PSTL 1281 Principles of Psychology
4 credit(s); prereq Have not received college credit for intro psych; Credit will not be granted if credit has been received for: PSY 1001; Meets CLE req of Social Sciences;
Instructor: Wambach, Christine A
Description: PSTL 1281 is an introductory psychology course. It is equivalent to Psy 1001 and introductory psychology courses offered at other colleges and universities. You should not take this course if you have already received college credit for introductory psychology. The course includes content required for future study in psychology, business, education and health sciences. The content of the course includes terminology, theories and the results of research from the major areas of research and practice including sensation, perception, cognition, motivation, emotion, learning, personality, abnormal behavior, therapeutic practices, health and social behavior. Style: 50% Lecture, 25% Discussion, 25% quizzes.
Grading: 15% final exam, 5% reports/papers, 50% quizzes, 10% written homework, 5% attendance, 15% other evaluation.
Exam Format: multiple choice
PSTL 1281 Principles of Psychology
4 credit(s); prerequisite: Have not received college credit for intro psych; Credit will not be granted if credit has been received for: PSY 1001; Meets CLE req of Social Sciences;
Instructor: Grier-Reed, Tabitha LaShau
Description: PSTL 1281 is an introductory psychology course. It is equivalent to Psy 1001 and introductory psychology courses offered at other colleges and universities. You should not take this course if you have already received college credit for introductory psychology. The course includes content required for future study in psychology, business, education and health sciences. The content of the course includes terminology, theories and the results of research from the major areas of research and practice including sensation, perception, cognition, motivation, emotion, learning, personality, abnormal behavior, therapeutic practices, health and social behavior.
Style: 20% Lecture, 20% Film/Video, 20% Discussion, 30% Small Group Activities, 10% Student Presentation. The nature of this class is primarily interactive, where the goal is to bring alive the concepts you encounter in the text in your outside reading.
Grading: 18% special projects, 52% additional semester exams, 5% attendance, 10% reflection paper, 7% in-class presentation, 5% class participation. Extra credit opportunities make up approximately 10% of the points available in the course (66/620).
Exam Format: All exams are multiple choice. There are 4 semester exams made up of 40 questions each. Each exam covers 4 chapters from the text.

PSTL 1281 Principles of Psychology
4 credit(s); prerequisite: Have not received college credit for intro psych; Credit will not be granted if credit has been received for: PSY 1001; Meets CLE req of Social Sciences;
Instructor: Madynun, Naim Hossein
Description: PSTL 1281 is an introductory psychology course. It is equivalent to Psy 1001 and introductory psychology courses offered at other colleges and universities. The course includes terminology, theories and the results of research focused on development, human error and nature vs. nurture. Course content will be explained and applied using the cognitive, behavioral, humanistic, trait, socio-cultural and psychoanalytic perspectives. TEXTBOOK: Psychology: The Science of Behavior, 3/e by R.H. Ettinger.
Style: 25% Lecture, 5% Film/Video, 10% Discussion, 10% Small Group Activities, 40% Web Based.
Grading: 12% final exam, 75% quizzes, 5% attendance, 8% class participation.

PSTL 1312 Creating Identities Through Art and Performance
4 credit(s); Meets CLE req of Arts/Humanities;
Instructor: Buturian, Linda J
Description: “Creating Identities through Art and Performance” is an introductory course that both analyzes and creates art in order to experience how different genres of art reveal social and cultural themes that shape identity. Students will be reading and reflecting on short stories, digital stories, plays, poetry, film, music, and photography. Students will also create multimedia projects which reflect their identity through some combination of text and images.
Style: 40% Lecture, 10% Film/Video, 10% Discussion, 5% Small Group Activities, 5% Student Presentation, 10% Demonstration, 10% Studio, 5% Guest Speakers, 5% Web Based.
Grading: 20% reports/papers, 20% special projects, 10% written homework, 10% attendance, 10% reflection paper, 20% in-class presentation, 10% class participation.

PSTL 1312 Creating Identities Through Art and Performance
4 credit(s); Meets CLE req of Arts/Humanities;
Instructor: Frederickson, Tina
Description: PSTL 1312 is an arts and humanities course that provides you with the opportunity to create, analyze, and understand how the creative process can reveal our cultural identity as an individual and as a community. This particular section of 1312 helps you explore identity and the creative process by focusing on developing an understanding and appreciation of the performing arts (theatre arts, oral interpretation of literature, storytelling/spoken word) from the perspective of critical viewer and creative participant. To that end, however, there is much overlap from other artistic mediums such as creative writing, visual art, dance, and music to infuse and enrich the creative experience as we explore the theme of identity. No prior experience in any particular artistic medium is needed, only the ability to be open and receptive, willing to explore and release your creative artistic voice.
Style: 5% Lecture, 5% Film/Video, 20% Discussion, 20% Small Group Activities, 30% Student Presentation, 10% Field Trips, 10% Studio.
Grading: 20% reports/papers, 10% special projects, 20% written homework, 10% attendance, 10% journal, 25% in-class presentation, 5% class participation.

PSTL 1365W Literatures of the United States: Multicultural Perspectives
4 credit(s); Meets CLE req of Diversity and Soc Justice US; meets CLE req of Literature; meets CLE req of Writing Intensive;
Instructor: Buturian, Linda J
Description: An introduction to U.S. literatures from 1865 to the present day. We will read a variety of stories, plays, poems, looking at issues of identity and diversity in the United States across a broad timespan through the experiences of literary characters from multiple ethnic and social backgrounds. The course is writing intensive; there will be some written assignments that are drafted and developed with feedback. There will also be a lot of discussion of the various works.
Style: 25% Lecture, 50% Discussion. Group work, in class writings.
Exam Format: Short answer and essay

PSTL 1366 Literatures of the United States: Multicultural Perspectives
3 credit(s); Meets CLE req of Diversity and Soc Justice US; meets CLE req of Literature;
Instructor: Hyland, Ezra St
Description: Introduction to U.S. literatures is designed to raise a range of questions about American identity within broad social, historical, political, and literary contexts while highlighting the diversity of form, perspective, and style in U.S. literature. Course emphasizes literary analysis, fostering student development of critical analysis and interpretation through close reading of texts, class discussion, and formal and informal writing assignments.

PSTL 1368 Literatures of the World: International Perspectives
3 credit(s); Meets CLE req of Global Perspectives; Meets CLE req of Literature;
Instructor: Jehangir PhD, Rashne Rustom
Description: Student may contact the instructor or department for information.

PSTL 1368 Literatures of the World: International Perspectives
3 credit(s); Meets CLE req of Global Perspectives; Meets CLE req of Literature;
Instructor: Buturian, Linda J
Description: Student may contact the instructor or department for information.

PSTL 1368 Literatures of the World: International Perspectives
3 credit(s); Meets CLE req of Global Perspectives; Meets CLE req of Literature;
Instructor: Harrison, K.C.
Description: This course offers students the opportunity to participate in a community of readers. Together we will read and respond to five contemporary works by authors from around the globe: Iran, China, Sri Lanka, Sierra Leone, and Haiti. In these readings you will recognize much that we share as human beings, as well as discover new perspectives based on different cultural contexts. All of the books on the syllabus present stories of growing up during times of political and social upheaval. We will explore questions such as: How do stories help us make sense of our world? What is the role of the writer during times of national or international crisis? How can reading contribute to global citizenship? This is not a lecture course but a forum for

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This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
PSTL 1525W First-Year Inquiry: Multidisciplinary Ways of Knowing
A-F only, 4 credit(s); prereq CEHD honors, 1st-term fr; Meets CLE req of Writing Intensive;
Instructor: Dorsey, Heather Jane
Description: Energy...Illuminated! Energy makes things happen. In a scientific sense, converting fuel into energy enables our work, our leisure activities, and our use of everyday manufactured objects. Failing resources and rising pollution, however, require societies to consider using energy in more sustainable ways. In a humanistic sense, energy defines our lives' actions. High energy people attack life with unstoppable enthusiasm. Nontraditional healers use energy pathways in our bodies to improve well-being. People from distinct religious traditions report drawing strength and guidance from the energy of a higher spirit. Students in this class will study the concept of energy from a wide range of perspectives informed by the disciplines of physics, psychology, anthropology and mathematics. As we read Prisoner of Tehran, we will explore the theme of forgiveness as a type of social energy. Can individuals and political entities realistically establish social harmony through forgiveness? In their capstone project, students will be asked to use both science and humanistic interpretations as they answer the question, “How does attention to energy enable people to make a difference?”

PSTL 1525V First-Year Inquiry: Multidisciplinary Ways of Knowing
A-F only, 4 credit(s); prereq CEHD honors, 1st-term fr; Meets CLE req of Writing Intensive;
Instructor: Madyun, Naim Hossein
Description: Energy...Illuminated! Energy makes things happen. In a scientific sense, converting fuel into energy enables our work, our leisure activities, and our use of everyday manufactured objects. Failing resources and rising pollution, however, require societies to consider using energy in more sustainable ways. In a humanistic sense, energy defines our lives' actions. High energy people attack life with unstoppable enthusiasm. Nontraditional healers use energy pathways in our bodies to improve well-being. People from distinct religious traditions report drawing strength and guidance from the energy of a higher spirit. Students in this class will study the concept of energy from a wide range of perspectives informed by the disciplines of physics, psychology, anthropology and mathematics. As we read Prisoner of Tehran, we will explore the theme of forgiveness as a type of social energy. Can individuals and political entities realistically establish social harmony through forgiveness? In their capstone project, students will be asked to use both science and humanistic interpretations as they answer the question, “How does attention to energy enable people to make a difference?”

PSTL 1525W First-Year Inquiry: Multidisciplinary Ways of Knowing
A-F only, 4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Trites, Jill K
Description: Student may contact the instructor or department for information.

PSTL 1525W First-Year Inquiry: Multidisciplinary Ways of Knowing
A-F only, 4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Dorsey, Heather Jane
Description: Energy...Illuminated! Energy makes things happen. In a scientific sense, converting fuel into energy enables our work, our leisure activities, and our use of everyday manufactured objects. Failing resources and rising pollution, however, require societies to consider using energy in more sustainable ways. In a humanistic sense, energy defines our lives' actions. High energy people attack life with unstoppable enthusiasm. Nontraditional healers use energy pathways in our bodies to improve well-being. People from distinct religious traditions report drawing strength and guidance from the energy of a higher spirit. Students in this class will study the concept of energy from a wide range of perspectives informed by the disciplines of physics, psychology, anthropology and mathematics. As we read Prisoner of Tehran, we will explore the theme of forgiveness as a type of social energy. Can individuals and political entities realistically establish social harmony through forgiveness? In their capstone project, students will be asked to use both science and humanistic interpretations as they answer the question, “How does attention to energy enable people to make a difference?”

PSTL 1525W First-Year Inquiry: Multidisciplinary Ways of Knowing
A-F only, 4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Jensen, Murray Stowe
Description: It's clear that food plays an integral part in our daily lives, but how much do you know about that burger you just ate? Will a healthy diet help you live longer? Can food really bring people together and resolve conflicts? In this course, team taught by a biologist, a social scientist, and a lawyer, we'll examine food through a variety of perspectives - scientific, sociological/psychological, literary, legal - to come to a better understanding of its impact on our world. Using writing, discussion, oral presentations, and other mediums, we'll consider the following question: Can you, either individually or working with others, make a difference by educating yourself and others about where food comes from and how to make informed choices about what you eat? We'll read and discuss Paul Rusesabagina's autobiography about the 1994 Rwandan genocide, An Ordinary Man, to explore how food and hospitality can make a life-saving difference in a difficult situation, as well as other food-related texts from a range of disciplines. At the end of the semester, students will collaborate in small groups to present a final capstone project on a food-related subject to the class (and possibly to the larger College of Education and Human Development academic community).

PSTL 1525W First-Year Inquiry: Multidisciplinary Ways of Knowing
A-F only, 4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Stebleton, Michael J
Description: It's clear that food plays an integral part in our daily lives, but how much do you know about that burger you just ate? Will a healthy diet help you live longer? Is fast food really that bad for you? How does food bring people together? How is food good for you? How does food bring people together and resolve conflicts? In this course, team taught by a biologist, a social scientist, and a lawyer, we'll examine food through a variety of perspectives - scientific, sociological/psychological, literary, legal - to come to a better understanding of its impact on our world. Using food-related texts from a variety of disciplines as well as writing, discussion, oral presentations, and other mediums, we'll consider the following question: Can you, either individually or working with others, make a difference by educating yourself and others about where food comes from and how to make informed choices about what you eat? At the end of the semester, students will collaborate in small groups to present a final Capstone Project on a food-related subject to the larger College of Education and Human Development academic community.

PSTL 1525W First-Year Inquiry: Multidisciplinary Ways of Knowing
A-F only, 4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Hodne, Barbara Downs
Description: JUICE ISN'T JUST US Reading "A Lesson Before Dying" will help us explore and express our own views of two institutional systems that clearly need people who can make a difference: the American educational system and the American justice system. But before we can stand up to make a difference in such large institutions, we must look inward to understand our beliefs and values about those institutions. For that inward look, we will discuss how education can help or hurt a person's understanding of who they are, and also consider how our courts, laws, and prisons work or do not work. Then we will look outward: we'll read contemporary stories of people's experiences in the educational and justice systems; we will read analysis articles that attempt to explain those experiences, and we will read profiles of activists trying to change those systems. Finally, our capstone project will be a collaborative activity highlighting both inward beliefs and outward action by asking students to research and publicize the work of a local person or group attempting to make changes that students in our class believe in and want to support. Acting toward justice is never acting for ourselves alone.

Style: 25% Lecture, 4% Film/Video, 40% Discussion, 20% Small Group Activities, 10% Student Presentation, 1% Guest Speakers.
Grading: 65% reports/papers, 10% written homework, 20% class participation, 5% other evaluation. Advising component: attend six advising workshops and one individual meeting with advisor.

PSTL 1525W First-Year Inquiry: Multidisciplinary Ways of Knowing
A-F only, 4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Trites, Jill K
Description: Student may contact the instructor or department for information.

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PSTL 1525W First-Year Inquiry: Multidisciplinary Ways of Knowing
A-F only, 4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Trites,Jill K
Description: Student may contact the instructor or department for information.

PSTL 1525W First-Year Inquiry: Multidisciplinary Ways of Knowing
A-F only, 4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Dorsey,Heather Jane
Description: Critical moments are those turning points where something changes, and that change affects the direction of a person’s life, community, nation or even world. This course explores the common question How can one person make a difference by looking at how people tell their stories, how context can affect a story? meaning, and all the many choices people make when they face critical moments. We will explore critical moments in our own narratives and in the lives of persons and characters in three historic events: the struggle for social justice and dignity in segregated Louisiana during the 1940’s, in New Orleans in 2005 when Hurricane Katrina hit Louisiana, and in Rwanda in 1993 when genocide occurred. This exploration will examine what forces create these personal, historic, social, political and artistic turning points in the lives of individuals, communities, countries and the world. Using contemporary and historical materials from the social sciences, humanities and theatre arts, we will explore the complexity of critical moments. Our primary texts will include the Paul Rusesabagina’s autobiography: An Ordinary Man ? on which the film, Hotel Rwanda is based, the Ernest Gaines memoir and play; A Lesson Before Dying, and the Spike Lee documentary film; When The Levees Broke.

PSTL 1525W First-Year Inquiry: Multidisciplinary Ways of Knowing
A-F only, 4 credit(s); Meets CLE req of Writing Intensive;
Instructor: Kelly, Margaret Ellen Delehanty
Description: Knowing the ways our actions can make important differences. We will question whether the individual is always the agent for change, or whether the context that surrounds the individual helps or hinders social action. The instructors will bring their backgrounds in law, writing, literature, American studies, and working with multilingual students to examine how experiences and stories are represented in art, literature, legal cases, and film. Student work will culminate in a multi-media capstone project that invites them to document a person or community that is making a difference.

PSTL 1571 Computer Literacy and Problem Solving
4 credit(s); prerequisite credit cannot be granted if credit has already been received for: 1573, or 1574; Course will not be granted if credit has been received for: RM 1203;
Instructor: Robertson, Douglas Frederick
Description: Students learn concepts and develop competencies in computer technologies most often used in social sciences and in business to help solve problems. Topics include using advanced word processing techniques to create complex written documents such as reports (including character and paragraph style sheets, mailmerge, formatting, tables, graphics, cross-references, headers, footnotes, and indexes), using an electronic spreadsheet to analyze data (including formulas, IF/THEN/ELSE, LOOKUP, different types of graphs, formatting), using a database management program to store, organize, and query data (including creating customized databases, modifying database structure, data verification and formatting, creating forms and reports, exporting/importing data, data extraction), and using presentation software to communicate ideas and findings in a multimedia format (including text, clipart, photos, tables, animations, and audio) to larger groups. Integration of the four applications is introduced. This is a computer-mediated course and there are no lectures. The instructor helps students individually during class as they work on course projects. Course uses Microsoft Office 2007 for Windows.
Style: Students work on computers, get help from instructor.
Grading: 30% mid exam, 35% final exam, 35% written homework.
Exam Format: Exams done on the computers in the classroom. Students modify documents as instructed.

PSTL 1993 Directed Study
1-8 credit(s), max credits 8, 1 completion allowed; prerequisite credit cannot be granted if credit has already been received for: 1573, or 1574; Course will not be granted if credit has been received for: RM 1203;
Instructor: Kroll, Patrick A
Description: Student-initiated project in consultation with faculty monitor. Student determines topic, sets goals, designs a course of study, and finds an appropriate faculty member to work with collaboratively.

PSTL 1996 Internship
1-8 credit(s), max credits 8, 1 completion allowed; prerequisite credit cannot be granted if credit has already been received for: 1573, or 1574; Course will not be granted if credit has been received for: RM 1203;
Instructor: Hsu, Leon
Description: Student may contact the instructor or department for information.

PSTL 3050 Exploring Facilitated Peer Learning Groups
S-N only, 1 credit(s); prerequisite credit cannot be granted if credit has already been received for: 1573, or 1574; Course will not be granted if credit has been received for: RM 1203;
Instructor: Arendale, David R
Description: This course explores peer learning groups and the factors that enhance their effectiveness including: facilitating the learning process, integrating learning skill development and content knowledge acquisition, and application of appropriate theories of learning. The course is designed to connect the experience of serving as a facilitator of a peer learning group with a deeper examination of the underlying assumptions, learning theories, active learning strategies, group management protocols, and best practices in education.

PSTL 5050 Reflecting on Professional Development Through Facilitating Peer Learning Groups
S-N only, 1 credit(s); prerequisite credit cannot be granted if credit has already been received for: 1573, or 1574; Course will not be granted if credit has been received for: RM 1203;
Instructor: Arendale, David R
Description: Student may contact the instructor or department for information.

PSTL 5106 Multicultural Teaching and Learning in Diverse College Contexts
A-F only, 3 credit(s); prerequisite credit cannot be granted if credit has already been received for: 1573, or 1574; Course will not be granted if credit has been received for: RM 1203;
Instructor: Higbee, Jeanne Louise
Description: Student may contact the instructor or department for information.

PSTL 5206 Action Research Methods to Improve College
Teaching and Learning
A-F only, 3 credit(s); prereq Grad student enrolled in PsTL MA program or DGS approval;
Instructor: Staats,Susan K
Description: Student may contact the instructor or department for information.

Preventive Science Minor
Institute of Child Development

PREV 8005 Prevention Science Capstone Course
OPT No Aud, 1 credit(s); prereq 8001;
Instructor: Reynolds,Arthur J
Description: Student may contact the instructor or department for information.

Prosthodontics
9-450 MoosT

PROS 7110 Classic Prosthodontic Literature Review
A-F only, 2 credit(s); prereq instr consent ;
Instructor: Holtan,James R
Description: Student may contact the instructor or department for information.

PROS 7200 Advanced Clinical Prosthodontics I
A-F only, 5 credit(s); prereq instr consent ;
Instructor: Holtan,James R
Description: Student may contact the instructor or department for information.

Psychology
N-218 Elliott Hall

PSY 1001 Introduction to Psychology
4 credit(s); Credit will not be granted if credit has been received for: PSTL 1281; Meets CLE req of Social Sciences;
Instructor: Brothen,Thomas
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policy, fee, and financial aid restrictions. Psych 1001 (online) utilizes a computer-assisted version of the Personalized System of Instruction (PSI) model. Key principles of PSI are specified learning objectives and study aids, small units (for us, these units are the chapters in your textbook), frequent testing with feedback to students, and mastery learning. The materials I've created for this course do three things. First, by focusing your attention on the main points, they make sure you don't miss important information. Second, because feedback is essential to learning, the computer exercises give you feedback when it will do you the most good--right after you finish an exercise--so that you can use that feedback to improve your knowledge. Much of what you do can simply be called practice, but it is guided practice. This will take longer than just reading but the old saying is as true about psychology as anything else "practice makes perfect."
Style: Online
Grading: 40% final exam, 60% written homework.
Exam Format: Online exam

PSY 1001 Introduction to Psychology
4 credit(s); Credit will not be granted if credit has been received for: PSTL 1281; Meets CLE req of Social Sciences;
Instructor: Brothen,Thomas
Description: Psy 1001 is a 4-credit introduction to the scientific study of human behavior and a prerequisite for all other Psychology courses. The course explores how something as complex as human behavior can be studied scientifically. Students will be introduced to biological, social and environmental factors that influence human behavior; predictable ways in which humans behave, reason, remember and feel; some important ways in which people differ, and how psychologists 'know' what we know. Each week, students attend (either in person or online) three lectures given by University of Minnesota Faculty, teaching in their area of expertise. In addition, each week they participate in active learning activities in a discussion section led by a graduate student in Psychology.
--Students in sections 002-024 attend live lectures and have one hour discussion sections of 30-35 students. --Students in sections 027-032 view videotapes of the live lectures at their convenience and have two hour discussion sections of ~60 students.
Style: 75% Lecture. 25% Discussion.
Grading: 30% mid exam, 25% final exam, 20% quizzes, 15% written homework, 5% class participation, 5% other evaluation. Students can earn up to 5% extra credit by participating in research studies done by Department of Psychology researchers.
Exam Format: multiple choice items administered in a University computer lab

PSY 1001 Introduction to Psychology
4 credit(s); Credit will not be granted if credit has been received for: PSTL 1281; Meets CLE req of Social Sciences;
Instructor: Luciana,Monica Marie
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. This course is designed to closely parallel the introductory psychology class offered to undergraduates at the University of Minnesota. It is a prerequisite for all other psychology courses. To the extent possible, the presentation of topics, format of written assignments, and exams conform to those used in the day school class. This study guide is organized into thirteen Lessons, with accompanying reading and written assignments. It is designed so that it can be completed within a single term.
Style: This is a printed correspondence section
Grading: Written assignments = 50 pts Midcourse exam = 75 pts Final exam = 75 ps TOTAL = 200 * Extra credit course
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Description</th>
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<tbody>
<tr>
<td>PSY 3001W</td>
<td>Introduction to Research Methods</td>
<td>Stellmack, Mark A</td>
<td>3 credit(s); prereq 1001; Credit will not be granted if credit has been received for: PSY 3005V; Meets CLE req of Writing Intensive; Description: PSY 3001W is an introduction to the basic concepts and procedures used to conduct and evaluate research in Psychology. Emphasis is placed on understanding traditional research methods, applying sound experimental techniques in order to produce interpretable results, and evaluating scientific claims. PSY 3001W is a writing intensive (WI) course. As such students will complete a number of writing assignments, culminating in an APA style research report. This course meets the writing intensive requirement stating that at least 33% of the student’s final grade must be based upon student writing. Prerequisites: PSY 1001 (Intro Psychology).</td>
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<tr>
<td>PSY 3005V</td>
<td>Psychology</td>
<td>Jiang, Yuhong Vanessa</td>
<td>3 credit(s); prereq 1001; Description: Welcome! This course will provide you with an overview of the theoretical and empirical approaches which constitute Cognitive Psychology. Cognitive psychologists explore the nature of cognitive processes such as attention, memory, concept, reasoning, perception, and language processing. Our goals are to understand (1) the representations and processes in our minds that underwrite these capabilities, and (2) how they are implemented in the underlying hardware, the human brain. Stated more simply, our goal is to understand how the mind works, and how the brain works to produce such a mind. Trying to understand our own minds is one of the most ambitious and exciting projects in all of sciences. This course will introduce you to some of the major tools, assumptions, and theories from a cognitive and cognitive-neuroscience perspective, and expose you to some of the more important results obtained thus far. Student evaluation from past years has been overwhelmingly positive. A copy of last year’s syllabus can be found at <a href="http://jianglab.psych.umn.edu/webpages/teaching.htm">http://jianglab.psych.umn.edu/webpages/teaching.htm</a>.</td>
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of behavior, mental states, and mental illness. You should also have begun to develop the skills to understand techniques and evaluate results of neurobiological and behavioral experiments. Style: 80% Lecture, 10% Discussion, 10% Small Group Activities.

Grading: 75% mid exam, 25% final exam. 3 mid term exams

PSY 3061 Introduction to Biological Psychology
3 credit(s); prereq 1001 or Biol 1009; Credit will not be granted if credit has been received for: PSY 5061;
Instructor: Gewirtz, Jonathan C
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policy, fee, and financial aid restrictions. Biological psychology is the study of behavior through the analysis of the nervous system and the study of the nervous system through analysis of behavior. The philosophical relationship between the "mind" and the brain has been debated for centuries. Discussions involve some of the most important concepts about human existence, such as "free will" and the existence of the soul. Here is the first (but certainly not the last) place that our own rather strongly held perspective will spill over into this study guide. The modern biological psychologist has found that our power to understand and explain behavior is greatest if we act under the hypothesis that the brain controls behavior. If we are to understand behavior, we must go to its source. Thus, to understand behavior, you must understand the brain. The pursuit of such understanding is a challenge, but it is an enormously tantalizing pursuit with great rewards.

Style: Online
Grading: 40% mid exam, 30% final exam, 30% written homework.
Exam Format: Online exams

PSY 3101 Introduction to Personality
3 credit(s); prereq 1001; Credit will not be granted if credit has been received for: PSY 5101;
Instructor: DeYoung, Colin G
Description: This course provides a broad overview of theory and research in the field of personality psychology. Personality psychology addresses some of the most central and interesting questions in psychology: Why do people think, feel, and act in the ways they do? What makes people different from each other? What are the essential components of an individual's personality? This course discusses answers to these questions as they have been formulated from the beginnings of psychology, over a century ago, up to the present time, drawing on up-to-date research to suggest which theories are likely to be empirically valid. Students should get a sense of the various approaches to personality psychology as different perspectives integrated into a larger story about the extent of our understanding of the structure, dynamics, and sources of personality.

PSY 3135 Introduction to Individual Differences
3 credit(s); prereq [1001, [2801/3801 or equiv]] or instr consent ; Credit will not be granted if credit has been received for: PSY 5135;
Instructor: Ludeke, Steven G
Description: This course will introduce students to the current state of the discussion over "nature" and "nurture," focusing on how alternative approaches explain individual differences. Ideas from evolutionary psychology, behavioral genetics, biological psychology, developmental psychology and social psychology will be considered. Topics surveyed include intelligence, personality, psychopathology, creativity, political attitudes and sexuality. Students are expected to leave the course with an understanding of the arguments and supporting examples marshaled by competing disciplines within psychology, to be able to independently evaluate novel arguments on the topic, and to know the current state of research on individual differences.

Style: 95% Lecture, 5% Discussion.

PSY 3201 Introduction to Social Psychology
3 credit(s); prereq 1001 or instr consent ;
Instructor: Moses, Jennifer Filson
Description: Student may contact the instructor or department for information.

PSY 3206 Introduction to Health Psychology
3 credit(s); prereq 1001;
Instructor: Burns, Rachel J
Description: Student may contact the instructor or department for information.

PSY 3301 Introduction to Cultural Psychology
A-F only, 3 credit(s); prereq 1001;
Instructor: Juan, Mary Joyce deGuzman
Description: Student may contact the instructor or department for information.

PSY 3511 Introduction to Counseling Psychology
3 credit(s); prereq 1001;
Instructor: Frankfurt, Sheila B
Description: Student may contact the instructor or department for information.

PSY 3511 Introduction to Counseling Psychology
3 credit(s); prereq 1001;
Instructor: Greer, Christiana Sean
Description: Student may contact the instructor or department for information.

PSY 3604 Introduction to Abnormal Psychology
3 credit(s); prereq 1001; Credit will not be granted if credit has been received for: PSY 5604H;
Instructor: Weiszhaar, Orville L
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policy, including fee and financial aid restrictions. The field of abnormal psychology (also known as psychopathology) is diverse, as you can see by leafing through the textbook for this course. It includes such topics as bipolar disorder, post-traumatic stress syndrome, AIDS dementia complex, pedophilia, stuttering, and pathological gambling. Each of these areas, as well as hundreds of others, has its own specialists and research. This course will provide you with a complete, although certainly not exhaustive, overview of each area.

Style: Online
Grading: --8 written assignments: 62.5% --2 online exams: 37.5%
Exam Format: Online

PSY 3604 Introduction to Abnormal Psychology
3 credit(s); prereq 1001; Credit will not be granted if credit has been received for: PSY 5604H;
Instructor: Schissel, Ann M
Description: Student may contact the instructor or department for information.

PSY 3633 Happiness: Integrating Research Across Psychological Sciences
3 credit(s); prereq 3001W or 3001V or instr consent ;
Instructor: MacDonald III, Angus
Description: What is the nature of human happiness and fulfillment? To answer this, we will build on insights from many disciplines, including cognitive, personality and social psychology, biology and even economics. The course approaches happiness from multiple levels of analysis to build an integrative approach to the feelings that make life worth living. The course will cover the measurement of happiness, preference and utility (economic approaches), flow and states that give rise to happiness (social psychology), adaptation (personality and behavioral genetics), pleasure centers in the brain (neuroscience), addiction and depression (clinical psychology). Students will (1) Learn the constituent properties of happiness, in terms of both basic mechanisms and individual differences (2) Conceptualize everyday, relevant and ancient questions in terms
of objective evidence and experiment methodologies (3) Learn to scrutinize popular and scholarly articles from diverse fields in terms of soundness of the assumptions and strength of data (4) Practice drawing together a coherent argument from diverse sources, and balance evidence appropriately. 

**Style:** 50% Lecture, 20% Discussion, 10% Small Group Activities, 20% Student Presentation. 

**Grading:** 40% reports/papers, 12% special projects, 12% quizzes, 12% reflection paper, 12% in-class presentation, 12% class participation. Students will read texts describing research in the area; make in-class presentations based on the readings; report on a personal experiment; and participate in class discussion. Evaluation of student performance will be based on class presentations, 

**PSY 3711 Introduction to Industrial and Organizational Psychology**  
3 credits(s); prereq [1001, [2801/3801 or equiv]] or instr consent ;  
**Instructor:** Beatty.Adam Skaja  
**Description:** Student may contact the instructor or department for information. 

**PSY 3801H Honors Introduction to Psychological Measurement and Data Analysis**  
A-F only, 3 credits(s); prereq will not be granted if credit already received for: Psy 2801 or Psy 2801H [1001 or equiv], high school algebra, honors; intended for students who plan to major in psychology; Credit will not be granted if credit has been received for: PSY 3801; Meets CLE req of Mathematical Thinking;  
**Instructor:** Nydick,Steven Warren  
**Description:** Student may contact the instructor or department for information. 

**PSY 3802W Major Project in Psychology**  
A-F only, 3 credits(s); prereq [2801/3801 or equiv], [3001W or 3005W], PSY major, sr; Meets CLE req of Writing Intensive;  
**Instructor:** Niccoli-Waller,Caprice  
**Description:** In this course, you will have the opportunity to review and reflect on some of the principles of research and writing within the field of psychology. You will also complete a writing project that is designed to let you focus on a topic of interest and to showcase your skills as a reader and potential contributor of the psychological literature. You will attend 3 lectures at the start of the term and then work in labs under graduate student assistance. At the end of the term, you will present your work in a class poster session. For additional course details please refer to the following site: http://www.psych.umn.edu/undergrad/majorproject.htm  
**Style:** 20% Lecture, 70% Laboratory, 10% Student Presentation. Those selecting research lab or community projects will spend time outside of class engaged in these activities. 

**Grading:** 50% reports/papers, 25% quizzes, 25% written homework. 

**PSY 3960 Undergraduate Seminar in Psychology**  
1-5 credit(s), max credits 45, 9 completions allowed; prereq 1001;  
**Instructor:** Overmier,J. Bruce  
**Description:** Title: Animal Models of Human Dysfunction. Instructor: Overmier, J Bruce Description: Discovery of the causal mechanisms for a human dysfunction often requires application of the experimental method. But this method may not be appropriate or ethical with humans. Then, animals may be called upon as models for a particular disorder. How are models developed and validated? What can we learn? Have models been successes? Failures? What are the ethical and regulatory considerations for such work? Several exemplar efforts at modeling will be reviewed and discussed. Workload: 30 pages of reading per week, presentations by students. Grades: Based on presentations by students and contributions to discussions.  
**Style:** 20% Lecture, 80% Discussion. Students will report and lead some discussions  

**Grading:** 25% reports/papers, 50% in-class presentation, 25% class participation. 

**PSY 5012 Learning and Cognition in Animals**  
4 credit(s); prereq 3011 or 4011 or honors or grad student or instr consent ;  
**Instructor:** Overmier,J. Bruce  
**Description:** Psy 5012 Learning and Cognition in Animals (Sec 001); 4 cr; prereq 3011 or 4011 or honors or grad student or instr consent; meets DELM req of classroom Instructor: Overmier, J. Bruce Description: Are you “smarter” than a rat? How can you know? This course provides review and evaluation of historical and contemporary approaches to key questions, theories, methods, and data about different forms of learning, behavior, and elementary cognitive processes as explored in animals. Although the emphasis is on animal models, implications of the findings for insights into human learning, behavior, and cognition are considered. The course uses primarily lecture format. It is intended for advanced undergraduates and beginning graduate students in the behavioral, biological, and educational sciences. Class time: 85% lecture, 5% Closed Circuit TV, 10% Discussion Work load: 45 pages of reading per week, 3 exams Grade: 50% mid-semester exam(s), 50% final exam Exam format: multiple choice and short essay. 

**PSY 5031W Perception**  
3 credit(s); prereq 3031 or 3051 or instr consent ; Meets CLE req of Writing Intensive;  
**Instructor:** Legge, Gordon Ernest  
**Description:** This course introduces students to known principles and contemporary theories of visual perception. The main topics include: light and vision, physiological optics, sensory coding of patterns, color vision, depth perception, object recognition, and impaired vision. The course is meant for advanced undergrads and grad students. Majors from many areas will find the course interesting, including psychology, biology, neuroscience, computer science, engineering, art, and design. Because this is a writing-intensive course (WI), some class time will be devoted to discussion of scientific writing. There will be an important focus on preparation of the term paper. For more information, see class website at http://vision.psych.umn.edu/~gellab/5031 .  
**Style:** 75% Lecture, 20% Discussion. Students will adopt and present an illusion in class.  
**Grading:** 25% mid exam, 25% final exam, 30% reports/papers, 5% special projects, 5% problem solving, 10% other evaluation. Miscellaneous assignments.  
**Exam Format:** essay, short answers and one problem to solve. 

**PSY 5038W Introduction to Neural Networks**  
3 credit(s); prereq [5061 or NSC 3102], [MATH 1282 or 2243] or instr consent; Meets CLE req of Writing Intensive;  
**Instructor:** Kersten, Daniel John  
**Description:** Student may contact the instructor or department for information. 

**PSY 5054 Psychology of Language**  
3 credit(s); prereq [3001W or equiv] or honors or grad student;  
**Instructor:** Fletcher, Charles R  
**Description:** Theories/experimental evidence in past and present conceptions of psychology of language. Topics include language and the brain, perceptual processes in reading, speech perception, lexical access, semantic memory, sentence and discourse comprehension, pragmatics, speech production, composition, language and thought and applied psycholinguistics.  
**Style:** 100% Lecture.  
**Grading:** 60% mid exam, 40% final exam.  
**Exam Format:** multiple choice, operational definitions, essay 

**PSY 5062 Cognitive Neuropsychology**  
3 credit(s); prereq 3031 or 3051;  
**Instructor:** He, Sheng  
**Description:** This course will survey the consequences of different types of brain damage on human perception and cognition. The goal is to understand the neural mechanisms of normal perceptual and cognitive functions. Major phenomena that will be covered include: Blindness (seiz)
This course is aimed at undergraduate and beginning graduate students who are interested in psychology and neuroscience. This course is focused on the application of psychological measurement methods to human and animal behavior. Genetic methods discussed include both tracitinal methodologies like twin and adoption studies as well as cytogenetic and molecular genetic methods. Behavioral applications covered include: Intelligence and mental retardation, personality, schizophrenia, affective illness, and alcoholism.

Style: 100% Lecture
Exam Format: Mixed Multiple Choice and Essay
Grading: 50% mid exam, 50% final exam.

**PSY 5960 Topics in Psychology**

3 credit(s), max credits 8; prereq PSY 1001, [jr or sr or grad student] ;
Instructor: Jiang,Yuhong Vanessa
Description: Student may contact the instructor or department for information.

**PSY 5993 Research Laboratory in Psychology**

3 credit(s), max credits 16, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Brothen,Thomas
Description: Student may contact the instructor or department for information.

**PSY 5993 Research Laboratory in Psychology**

3 credit(s), max credits 16, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Iacono,William George
Description: Student may contact the instructor or department for information.

**PSY 5993 Research Laboratory in Psychology**

3 credit(s), max credits 16, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Kersten,Daniel John
Description: Student may contact the instructor or department for information.

**PSY 5993 Research Laboratory in Psychology**

3 credit(s), max credits 16, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Grove,William Merrill
Description: Research topics include clinical judgment and actuarial data combination, philosophy of statistics and scientific theory testing, and classification of the major psychiatric disorders, central planning deficits. The emphasis is on function and phenomenology, with minimal amount of brain anatomy. This course is aimed at undergraduate and beginning graduate students who are interested in psychology and neuroscience. Text: A.J. Parkin "Explorations in Cognitive Neuropsychology".

Style: 50% Lecture, 5% Discussion
Grading: 30% mid exam, 50% final exam, 20% problem solving.

**Exam Format:**

Grading: 30% mid exam, 50% final exam, 20% problem solving.

**Exam Format:**

Style: 50% Lecture, 5% Discussion
Grading: 30% mid exam, 50% final exam, 20% problem solving.

**Exam Format:**

Grading: 30% mid exam, 50% final exam, 20% problem solving.

**Exam Format:**

Grading: 30% mid exam, 50% final exam, 20% problem solving.

**Exam Format:**

Grading: 30% mid exam, 50% final exam, 20% problem solving.

**Exam Format:**

Grading: 30% mid exam, 50% final exam, 20% problem solving.

**Exam Format:**

Grading: 30% mid exam, 50% final exam, 20% problem solving.

**Exam Format:**

Grading: 30% mid exam, 50% final exam, 20% problem solving.
This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online University of Minnesota - Course Guide for Twin Cities Campus Fall 2011.
PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Gonzales,Marti Hope
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Snyder,Mark
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Fletcher,Charles R
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Schrater,Paul Robert
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: He,Sheng
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Krueger,Robert
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Gewirtz,Jonathan C
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Lee,Richard M
Description: This directed research is designed for undergraduate and graduate students interested in the role of race, ethnicity, and culture in the development and well-being of individuals and families from diverse racial and ethnic backgrounds with a particular focus on adopted individuals and families and children of immigrant parents.
Style: 20% Discussion, 80% Laboratory. Students are expected to attend a weekly lab group meeting and reading group.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Federico,Christopher Michael
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Koutstaal,Wilma
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Oxenham,Andrew John
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Jiang,Yuhong Vanessa
Description: This is a research laboratory class with a focus on attention and memory research. Students are expected to work 8 hours in Prof. Jiang's laboratory in chunks of 2 half days or 1 whole day. During this time students will engage in active laboratory research, including experimental design, data collection and analysis, and stimulus creation. Because of the significant amount of supervision involved, this class has limited enrollment with the permission of the instructor. It is expected that no more than 5 students will be permitted to enroll in this class in Fall'08 and Spring'09 combined. The class is shaped around individual students, with each person learning at his or her own pace. Those who do end up enrolling in the course have in the past learned a lot from it. Grading will be given on the basis of attendance, laboratory performance, and a 5-page final paper.
Style: 10% Discussion, 80% Laboratory, 10% Small Group Activities.
Grading: 15% reports/papers, 70% attendance, 15% laboratory evaluation.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Mann,Traci Lynn
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Engel,Stephen A
Description: Engel lab research/lab meeting

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: DeYoung,Colin G
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Schmidt,Aaron Michael
Description: Student may contact the instructor or department for information.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq instr consent , dept consent ;
Instructor: Syed,Moin
Description: This directed research is designed for undergraduate and graduate students interested in the topics of narrative, identity, culture, and education, with particular emphasis on a developmental perspective. Students interested in any one of these four topics are encouraged to enroll, but the primary emphasis will be on narrative approaches to development (e.g., how cultural, ethnic, and racial identities are constructed and communicated through narrative). We will explore issues pertaining to narrative theory, methods, coding, and analysis; how narrative can complement other forms of inquiry; and how narrative can contribute to social justice
Research; among other topics. Students are expected to attend a
weekly lab group meeting and reading group.

PSY 5993 Research Laboratory in Psychology
3 credit(s), max credits 18, 6 completions allowed; prereq
instructor consent , dept consent ;
Instructor: Lissek, Shmuel
Description: Student may contact the instructor or department
for information.

PSY 8061 Neuropsychopharmacology
A-F only, 3 credit(s); prereq 5xxx coursework in biological
psych or neuroscience or pharmacology or instructor consent ;
Instructor: Roy, Sabita
Description: This course addresses the role of specific
neurotransmitter systems in mental illness and drug addiction, a
field of almost exponential growth in research over the past two
decades. The first part of the course provides an overview of the
structure and function of the nervous system from a
neuropsychopharmacological perspective. The second part deals with
methods typically employed in neurobehavioral pharmacology.
The final, and most extensive, portion of the course examines
the neuropathological basis of several broad categories of
mental illness including mood disorders, schizophrenia, and
autism, with particular emphasis on drug addiction.
Style: 50% Lecture, 25% Discussion, 25% Student Presentation.

PSY 8201 Social Cognition
A-F only, 3 credit(s); prereq Psych PhD candidate;
Instructor: Borgida, Eugene
Description: Student may contact the instructor or department
for information.

PSY 8204 Social Psychology of Prejudice and Intergroup
Relations
3 credit(s);
Instructor: Federico, Christopher Michael
Description: Student may contact the instructor or department
for information.

PSY 8205 Proseminar: Research in Social Psychology
3 credit(s), max credits 15, 5 completions allowed; prereq
Psych PhD student;
Instructor: Simpson, Jeffrey A
Description: Student may contact the instructor or department
for information.

PSY 8209 Research Methods in Social Psychology
A-F only, 3 credit(s); prereq Psych PhD student;
Instructor: Rothman, Alexander John
Description: Student may contact the instructor or department
for information.

PSY 8211 Proseminar in Political Psychology I
S-N only, 1 credit(s); prereq Political Psychology grad minor;
Credit will not be granted if credit has been received for:
POL 8307;
Instructor: Goren, Paul Nurullah
Description: Student may contact the instructor or department
for information.

PSY 8503 Interviewing and Intervention
3 credit(s); prereq 8501, 8502 or instructor consent ;
Instructor: Lee, Richard M
Description: Student may contact the instructor or department
for information.

PSY 8510 Counseling Psychology Beginning Practicum:
General
S-N only, 1-6 credit(s), max credits 6, 1 completion allowed;
prereq Counseling psych grad student, 8501, 8502, 8503 or
instructor consent ;
Instructor: Hansen, Jo-Ida C
Description: Student may contact the instructor or department
for information.

PSY 8514 University Counseling Practicum I
S-N only, 4-6 credit(s), max credits 6, 1 completion allowed;
prereq Counseling psych grad student, 8501, 8502, 8503 or
instructor consent ; Credit will not be granted if credit has
been received for: EPSY 8513;
Instructor: Beckman-Chasnoff, Sarra
Description: Student may contact the instructor or department
for information.

PSY 8542 Ethics in Psychology
S-N only, 3 credit(s); prereq Counseling or clinical psych
grad student or instructor consent;
Instructor: Brunnquell, Donald Joseph
Description: Philosophical systems of ethics and their
implications for applied psychology (clinical, counseling,
industrial & organizational). Practical ethical dilemmas that
emerge in applied psychology, and solutions to them. This
course is in a discussion format, with assigned readings in
behavior science and medical ethics for each class session.
There is a midterm examination and an assigned paper to write
about an ethical dilemma (student's choice of topic, approved by
the instructors.
Grading: 45% mid exam, 45% reports/papers, 5% in-class
presentation, 5% class participation.

PSY 8560 Counseling Psychology Advanced Practicum I:
General
S-N only, 1-6 credit(s), max credits 6, 1 completion allowed;
prereq [[[8501, 8502, 8503] or equiv, [8510, 8511]] or [8514, 8515] or equiv]],
counseling psych grad student] or instructor
consent ;
Instructor: Frazier, Patricia Ann
Description: Student may contact the instructor or department
for information.

PSY 8565 Counseling Psychology Advanced Practicum I:
Vocational Assessment Clinic
S-N only, 1-6 credit(s), max credits 6, 1 completion allowed;
prereq [[[8501, 8502, 8503] or equiv], [8510, 8511] or [8514, 8515] or equiv]],
counseling psych grad student] or instructor
consent ;
Instructor: Conlon, Amy Lynne
Description: Student may contact the instructor or department
for information.

PSY 8570 Counseling Psychology Internship I
S-N only, 1-12 credit(s), max credits 36, 36 completions
allowed; prereq Counseling psych PhD candidate, instructor
consent;
Instructor: Hansen, Jo-Ida C
Description: Student may contact the instructor or department
for information.

PSY 8611 Assessment I
A-F only, 5 credit(s); prerequisite: Clinical psych grad student; Instructor: Grove, William Merrill

Description: Dr. Grove's part of this course covers clinical judgment and data combination. Heuristic and mathematically correct decision aids are featured. Topics include errors in clinical judgment and how to avoid them, base rates and Bayes theorem, and signal detection theory. Grading: 90% final exam, 10% class participation.

PSY 8620 Clinical Psychology Practicum
S-N only, 1-6 credit(s), max credits 36, 8 completions allowed; prerequisite: instr consent; Instructor: MacDonald III, Angus

Description: Student may contact the instructor or department for information.

PSY 8621 Clinical Intervention I
A-F only, 1-3 credit(s), max credits 3, 1 completion allowed; prerequisite: Clinical psych grad student; Instructor: Ayers, James L

Description: Student may contact the instructor or department for information.

PSY 8701 Seminar in Industrial and Organizational Psychology I
A-F only, 3 credit(s); Instructor: Kuncel, Nathan Richard

Description: Student may contact the instructor or department for information.

PSY 8881 Seminar: Quantitative and Psychometric Methods
3 credit(s), max credits 15, 5 completions allowed; Instructor: Weiss, David J

Description: Student may contact the instructor or department for information.

PSY 8935 Readings in Behavioral Genetics and Individual Differences Psychology
S-N only, 1 credit(s), max credits 10, 10 completions allowed; prerequisite: 5135, 5137 or instr consent; Instructor: McGuire, Matt

Description: Student may contact the instructor or department for information.

PSY 8960 Graduate Seminar in Psychology
1-4 credit(s), max credits 36, 9 completions allowed; prerequisite: Psychology grad student or instr consent; Instructor: Kersten, Daniel John

Description:Psy 8960(001) Proseminar in Perception. 3 Credits. Survey of advanced topics in audition and vision. This course interweaves background lectures with discussions of current research in auditory and visual processing. Topics include the neurophysiology and neuroanatomy underlying peripheral sensory transformations, computational frameworks for sensory coding and perceptual functions, the representation of perceptual dimensions and features, object representation and scene analysis, attention, integration of auditory and visual processing, and applications to sensory impairment. Through guest lectures, students will also be exposed to the range of perception research currently underway at the University of Minnesota.

PSY 8960 Graduate Seminar in Psychology
1-4 credit(s), max credits 36, 9 completions allowed; prerequisite: Psychology grad student or instr consent; Instructor: Weiss, David J

Description: Student may contact the instructor or department for information.

PA 1961W Personal Leadership in the University
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: EDPA 1301W; Meets CLE req of Writing Intensive; Instructor: Knudson, Laura J

Description: Introduction to leadership theory, personal development, interpersonal relations, leadership at University of Minnesota. Personal assessment, written/verbal presentation, resume writing, electronic communication, goal setting, coping with group dynamics.

PA 1961W Personal Leadership in the University
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: EDPA 1301W; Meets CLE req of Writing Intensive; Instructor: Vang-Lo, Ah

Description: Student may contact the instructor or department for information.
Description: Public and non-profit organizations are expected to manage their finances well while providing quality services. Governments are increasingly pressured to do more with less, and non-profit organizations are expected to perform better in doing good. To meet these challenges, it is important that managers and employees of public and non-profit organizations possess the fundamental skills of financial analysis and management. This is an introductory course in financial analysis and budgeting for public and non-profit organizations. It is designed for students who have some background in financial analysis, and wish to gain a clearer understanding of nonprofit and public financial analysis and budgeting. PA 3003 is open to all students, and is one of the core courses of the Nonprofit/Public Track Management Minor in the Carlson School of Management. The primary objective of this course is to help students understand and use financial information available from financial documents, such as budgets and financial statements. Conceptual frameworks and analytical techniques will be emphasized and applied to analyze real-world financial problems through the use of case studies and practical exercises.

PA 3961 Leadership, You, and Your Community

A-F only, 3 credit(s); prereq [1961W or EdPA 1301W], [jr or sr]; Credit will not be granted if credit has been received for: EDPA 3302;
Instructor: Ve Lure Roholt, Christine Elizabeth
Description: This course will examine leadership and leadership capacities within the context of social change and public work. Students taking this course will have the opportunity to examine how values (their own and others') guide leadership and social change. We will focus on how change is possible around a given social issue and how local organizations/businesses/groups utilize leadership to create positive change. Learning Objectives:
(a) Demonstrate resilience through taking risks, failing, questioning and then adapting your actions and thinking to the contexts you encounter in class and in your community. How do you prepare to come in right again, again and again? (b) Improve ability to research and analyze complex social issues/systems in order to create sustainable and effective actions. How do you create an adaptive solution to a challenging problem? What is the importance of and how does one explore various viewpoints, complete in-depth research and look at the system as a whole? (c) Push your personal and interpersonal boundaries to support a safe, learning community during our classroom time and a regular self-renewal practice. How do you help to create our safe community? How do you prohibit or damage the safe community? Why is it vital for leaders to find ways to renew themselves personally and professionally? What are some ways to do this? (d) Strengthen self-awareness of the interaction of your personal framework of being in the world and other's framework of being in the world. How do your set of values, political, social and philosophical viewpoints live in the world alongside that of other people's set of values, political, social and philosophical viewpoints? Why and how does this matter to our leadership (individually and collectively)? (e) Increase awareness of and practice the discipline (mental, physical, and emotional) that is required to become a responsible and accountable leader and learner in our world today. (f) Explore more deeply these concepts important to leadership. What exactly do they mean? How do you make sense of them in your practice of leadership? --Adaptive Leadership --Values --Power --Relationships --Accountability and trust

PA 3961 Leadership, You, and Your Community

A-F only, 3 credit(s); prereq [1961W or EdPA 1301W], [jr or sr]; Credit will not be granted if credit has been received for: EDPA 3302;
Instructor: Hellstrom, David P
Description: This course will examine leadership and leadership capacities within the context of social change and public work. Students taking this course will have the opportunity to examine how values (their own and others') guide leadership and social change. We will focus on how change is possible around a given social issue and how local organizations/businesses/groups utilize leadership to create positive change. Learning Objectives:
(a) Demonstrate resilience through taking risks, failing, questioning and then adapting your actions and thinking to the contexts you encounter in class and in your community. How do you prepare to come in right again, again and again? (b) Improve ability to research and analyze complex social issues/systems in order to create sustainable and effective actions. How do you create an adaptive solution to a challenging problem? What is the importance of and how does one explore various viewpoints, complete in-depth research and look at the system as a whole? (c) Push your personal and interpersonal boundaries to support a safe, learning community during our classroom time and a regular self-renewal practice. How do you help to create our safe community? How do you prohibit or damage the safe community? Why is it vital for leaders to find ways to renew themselves personally and professionally? What are some ways to do this? (d) Strengthen self-awareness of the interaction of your personal framework of being in the world and other's framework of being in the world. How do your set of values, political, social and philosophical viewpoints live in the world alongside that of other people's set of values, political, social and philosophical viewpoints? Why and how does this matter to our leadership (individually and collectively)? (e) Increase awareness of and practice the discipline (mental, physical, and emotional) that is required to become a responsible and accountable leader and learner in our world today. (f) Explore more deeply these concepts important to leadership. What exactly do they mean? How do you make sense of them in your practice of leadership? --Adaptive Leadership --Values --Power --Relationships --Accountability and trust

PA 3961 Leadership, You, and Your Community

A-F only, 3 credit(s); prereq [1961W or EdPA 1301W], [jr or sr]; Credit will not be granted if credit has been received for: EDPA 3302;
Instructor: Asmundson, Aaron R
Description: This course will examine leadership and leadership capacities within the context of social change and public work. Students taking this course will have the opportunity to examine how values (their own and others') guide leadership and social change. We will focus on how change is possible around a given social issue and local organizations/groups utilize leadership to create positive change. Learning Objectives:
(a) Demonstrate resilience through taking risks, failing, questioning and then adapting your actions and thinking to the contexts you encounter in class and in your community. How do you prepare to come in right again, again and again? (b) Improve ability to research and analyze complex social issues/systems in order to create sustainable and effective actions. How do you create an adaptive solution to a challenging problem? What is the importance of and how does one explore various viewpoints, complete in-depth research and look at the system as a whole? (c) Push your personal and interpersonal boundaries to support a safe, learning community during our classroom time and a regular self-renewal practice. How do you help to create our safe community? How do you prohibit or damage the safe community? Why is it vital for leaders to find ways to renew themselves personally and professionally? What are some ways to do this? (d) Strengthen self-awareness of the interaction of your personal framework of being in the world and other's framework of being in the world. How do your set of values, political, social and philosophical viewpoints live in the world alongside that of other people's set of values, political, social and philosophical viewpoints? Why and how does this matter to our leadership (individually and collectively)? (e) Increase awareness of and practice the discipline (mental, physical, and emotional) that is required to become a responsible and accountable leader and learner in our world today. (f) Explore more deeply these concepts important to leadership. What exactly do they mean? How do you make sense of them in your practice of leadership? --Adaptive Leadership --Values --Power --Relationships --Accountability and trust

PA 3971 Leadership Minor Field Experience

A-F only, 3 credit(s); prereq [1961W or EdPA 3302W] with grade of at least C; Credit will not be granted if credit has been received for: EDPA 3402;
Instructor: Ve Lure Roholt, Christine Elizabeth
Description: Student may contact the instructor or department for information.

PA 3971 Leadership Minor Field Experience
A-F only, 3 credit(s); prerequisite [3961W or EDPA 3302W] with grade of at least C; Credit will not be granted if credit has been received for: EDPA 3402;
Instructor: Yawson, Robert Mayfield
Description: Student may contact the instructor or department for information.

PA 4101 Nonprofit Management and Governance
3 credit(s);
Instructor: Classen, Julia E
Description: As civil society organizations, nonprofit agencies have a long and important tradition within American democracy. Yet as the current fiscal environment makes clear, a compelling mission alone is insufficient to assure these organizations survive and thrive; professional and innovative nonprofit management, leadership and governance is essential. In this course, we examine real world examples and review theories and practices that apply to them. There are many unique issues nonprofit managers and leaders face, including tensions between the nonprofit mission and the ever-changing funding market, participation in policymaking, professionalism of the sector, accountability demands and the challenges of part-time volunteers as board members providing governance, oversight and leadership to increasingly complex organizations. This course is offered in a mixed online and face-to-face format (4 meetings throughout the term). It begins by exploring the nonprofit sector and examining what make nonprofits unique. From that foundation, we will examine governance and accountability of nonprofit boards, the funding challenges and program evaluation, strategic management theory and practice, the role of nonprofits in policymaking and the unique aspects on nonprofit finance. Making generalizations about nonprofits can be difficult because of the size and diversity of the sector and therefore the types of organizations in it. We will endeavor to be sensitive to that challenge by drawing upon examples from the many subsectors including, health, religious institutions, performing arts, human services and advocacy organizations. The teaching method will be an interactive model drawing upon readings, asynchronous discussion boards, presentations from practitioners from the local nonprofit community, online presentations of material with podcasts and video casts, teaching cases, and collaborative projects.

Description:

PA 4190 Topics in Public and Nonprofit Leadership and Management
3 credit(s), max credits 9, 3 completions allowed;
Instructor: Barreiro, Terri Diane
Description: Student may contact the instructor for information.

PA 4200 Urban and Regional Planning
3 credit(s);
Instructor: Becker, Carol
Description:

PA 4490 Topics in Social Policy
1.5-3 credit(s), max credits 9, 3 completions allowed;
Instructor: Stone, Paul Clois
Description: Student may contact the instructor or department for information.

PA 4961W Leadership for Global Citizenship
A-F only, 3 credit(s); prerequisite 3971 or EdPA 3402; Credit will not be granted if credit has been received for: EDPA 4303W;
Meets CLE req of Writing Intensive;
Instructor: Werner, Linnette
Description: This course, the capstone academic experience in the Undergraduate Leadership Minor sequence, is designed to focus student learning that has been developed in earlier leadership courses. Leadership theory, community building, social change, and interdisciplinary approaches to complex global issues will be the main components in this course.

Students will be expected to demonstrate skill in analysis of pertinent literature, write with purpose and clarity, appreciate intense internships, and lead thoughtful group study. In this course, students will finalize portfolios and submit other scholarly products to demonstrate a mature understanding of personal and positional leadership in a changing global context.

PA 5002 Introduction to Policy Analysis
A-F only, 1.5 credit(s); prerequisite Major in [public policy or science/technology/environmental policy] or instr consent;
Instructor: Myers Jr, Samuel L
Description: Process of public policy analysis from problem structuring to communication of findings. Commonly used analytical methods. Alternative models of analytical problem resolution.

PA 5003 Introduction to Financial Analysis and Management
A-F only, 1.5 credit(s); prerequisite Development practice major or public policy major or public affairs major or grad liberal studies major or grad nonprofit mgmt cert or instr consent;
Instructor: Kiedrowski EdD, P. Jay
Description: This is an introductory course to budgeting and financial analysis in the context of public and nonprofit organizations. The primary learning objective of this course is how to obtain accurate financial information to make sound management decisions through the analysis of financial documents such as budgets and financial statements. The processes of producing such documents will be introduced but are not the focus of this course. Conceptual frameworks and analytical techniques will be emphasized and applied to analyze real-world financial problems. Lectures, discussions, and cases/examples from nonprofit and public sector organizations will be utilized.
Style: 50% Lecture, 20% Discussion, 10% Small Group Activities, 10% Student Presentation, 10% Demonstration.
Grading: 30% mid exam, 30% final exam, 25% reports/papers, 15% class participation.

PA 5004 Introduction to Planning
A-F only, 3 credit(s); prerequisite Major in urban/regional planning or instr consent;
Instructor: Allen, Ryan Patrick
Description: History, institutional development of urban planning as a profession. Intellectual foundations, planning theory. Roles of urban planners in U.S./international settings. Scope, legitimacy, limitations of planning and of planning process. Issues in planning ethics and in planning in settings of diverse populations/stakeholders.

PA 5011 Management of Organizations
A-F only, 3 credit(s); prerequisite Major in public policy or instr consent;
Instructor: Bloomberg PhD, Laura L
Description:

PA 5011 Management of Organizations
A-F only, 3 credit(s); prerequisite Major in public policy or instr consent;
Instructor: Bryson, John M
Description: Student may contact the instructor or department for information.

PA 5011 Management of Organizations
A-F only, 3 credit(s); prerequisite Major in public policy or instr consent;
Instructor: Sandorf, Jodi R.
Description: Managers and leaders today are constantly confronted with new challenges brought about by the global economy, pressures to improve performance, and demands to
Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Class Schedule.
PA 5039 Analytics for Leaders II  
A-F only, 2 credit(s); prereq 5038;  
Instructor: Le, Thanh Trung  
Description: Student may contact the instructor or department for information.

PA 5041 Qualitative Methods for Policy Analysts  
A-F only, 4 credit(s); prereq Grad or instr consent;  
Instructor: Fennely, Katherine  
Description: This class is designed to introduce students to several qualitative analysis techniques and to provide hands-on experience in designing, gathering and analyzing data. After successfully completing this course students should be able to: 1. Determine when to use interviews, observations and discourse or document analysis, and combinations of quantitative and qualitative data; 2. Design questions and protocols appropriate to each method; 3. Apply basic techniques to analyze data; and 4. Honor confidentiality and respect sensitivity of data collection methods from the perspective of clients.

PA 5080 Capstone Preparation Workshop  
S-N only, 1 credit(s); prereq Concurrent registration is required (or allowed) in 8081;  
Instructor: Norton, Kimberly Joy  
Description:  

PA 5101 Management and Governance of Nonprofit Organizations  
3 credit(s); prereq 5011 or 5941 or grad liberal studies major or grad nonprofit mgmt cert or instr consent;  
Instructor: With-Davis, Michael Eric  
Description: Theories, concepts, and real world examples of managerial challenges. Governance systems, strategic management practices, effect of funding environments, management of multiple constituencies. Types of nonprofits using economic/behavioral approaches.

PA 5104 Strategic Human Resource Management  
A-F only, 3 credit(s); prereq 5011 or 5941 or grad nonprofit mgmt cert or instr consent;  
Instructor: Kiedrowski EdD, P. Jay  
Description: Theory/practice of developing, utilizing, and aligning human resources to improve culture/outcomes of nonprofit/public organizations. HR strategy, individual diversity, leadership, selection, training, compensation, classification, performance appraisal, future HR practices.  
Style: 40% Lecture, 30% Discussion, 20% Student Presentation, 10% Guest Speakers.  
Grading: 45% reports/papers, 30% in-class presentation, 25% class participation.

PA 5190 Topics in Public and Nonprofit Leadership and Management  
3 credit(s), max credits 9, 3 completions allowed; prereq 5011 or 5941 or grad nonprofit mgmt cert or instr consent;  
Instructor: Anderson Kellner, Margaret E  
Description: Student may contact the instructor or department for information.

PA 5211 Land Use Planning  
3 credit(s); prereq Grad student or instr consent;  
Instructor: Fan, Yingling  
Description: To land use planners, the perennial question is how land use planning can be applied to create human settlement patterns that promote sustainable, equitable, and livable outcomes in metropolitan regions, cities, towns, and villages. Answers to this question are explored in this course with a focus on real-world planning process and implementation. Students will be exposed to a variety of methods and techniques available to planning practitioners to create and implement high-quality land use plans. Skills covered in this course include analysis and synthesis skills; oral, graphic, and written communication skills; and skills for working effectively as a member of a planning team and with community stakeholders. By the end of this course, students should be able to articulate a clear vision of what constitute an effective local land use plan and be able to describe a range of possible plan formats. Students should be able to specify the components of a complete land use plan program, and know where a plan fits into such a program. Students should develop a dependable sense of judgment for assessing the validity, effectiveness, feasibility, strengths and weaknesses of various land use plan-making methods and plan formats. More specifically, this course will help students learn how to formulate a land use plan in a professional manner and appropriate to the community context by actually making a plan for a small-size hypothetical city. Tasks to be mastered in this course include: 1. Describe and assess existing and emerging community conditions; 2. Formulate goals and objective towards a community vision statement; 3. Translate projections of economic and population changes into their land use implications for land, location, and community services; 4. Determine the suitability of land and locations for various land uses; 5. Apply computer technology to specific plan-making tasks such as map presentations, land suitability analyses, and the drawing of plans; 6. Design a future urban form that meets the community’s objectives, accommodates the future population and economy, and incorporates community aspirations for a quality of life; and 7. Outline a development management program that helps bring such a future.

PA 5217 Geographic Information Systems: Applications in Planning and Policy Analysis  
3 credit(s); prereq Major in urban/regional planning or instr consent;  
Instructor: Bolan, Richard Stuart  

PA 5221 Geographic Information Systems: Applications in Planning and Policy Analysis  
3 credit(s); prereq Major in urban/regional planning or instr consent;  
Instructor: Fan, Yingling  
Description: Geographic Information Systems (GIS) is an increasingly growing field, providing spatial data management and analysis services to a broad range of business and public organizations. In 1999, US News identified the GIS occupation as one of the “21 hot jobs for the 21st century?”, claiming that the number of GIS positions in local governments alone will rise from 20,000 to 36,000 by the year 2010. The use of GIS is inevitable in urban planning and public policy as both fields involve exploring location-related trends and issues. For instance, planners routinely conduct geo-spatial analyses to study residential clustering, to explore the spatial mismatch between jobs and workers, and to identify suitable land for urban transition, infill development, or environmental conservation. To public policy professionals, GIS facilitates spatial visualization of poverty, crime, pollution, and health patterns, allowing those who on the front line of public services to distribute tax money more fairly and to protect life and property more effectively. In simple words, GIS skills are a valuable asset in today’s competitive job market. This course covers GIS basics (e.g., map projections,
coordinate systems, spatial data manipulation & visualization, and geodatabase management) as well as advanced GIS applications (e.g., network analysis, raster & TIN models, socio-demographic analysis, 3-D analysis, hot-spot analysis, spatial interpolation, and other spatial statistics). It gives special attention to making GIS useful to urban planners and policy analysts. It is not intended to make students into GIS coding, spatial modeling or spatial statistics experts & those interested in a GIS-based career path should continue to take programming and database courses in Computer Science and advanced GIS offerings in the Department of Geography.

PA 5290 Topics in Planning
1.5 credit(s), max credits 9, 3 completions allowed; prereq Grad student or instr consent ;
Instructor: Ingraham,Gregory Howard
Description: Overview: Site planning is the process of analyzing and preparing graphic plans for development or redevelopment of property. The intent of this course is to provide a practical hands-on understanding of site planning issues, process, opportunities and techniques through preparation of a site plan for a real world site. The course includes a site walk on campus and visits to the off-campus project site and to HKGI offices in Minneapolis. The course project is to prepare a site plan for a Twin City area development/redevelopment site. The final site plan will build from layers through a series of weekly assignments illustrating typical steps in the site planning process. During the final class students will present their site plan to the class. Reading material consists of a reading packet, in-class handouts, web research and Web CT postings. Course reading packet will be available at the bookstore and on reserve at Wilson Library.
Style: 40% Lecture, 15% Discussion, 5% Small Group Activities, 5% Student Presentation, 20% Field Trips, 15% Guest Speakers. Requires the ability to get to the project site (Eden Prairie) and one off campus class in DT Mpls.
Grading: 85% special projects, 15% class participation.

PA 5401 Poverty, Inequality, and Public Policy
3 credit(s); prereq Grad or instr consent ;
Instructor: Hannarty,Maria J
Description: Nature/extent of poverty/inequality in the United States, causes/consequences, impact of government programs/policies. Extent/causes of poverty/inequality in other developed/developing countries.

PA 5451 Immigrant Health Issues
A-F only, 3-4 credit(s), max credits 4, 1 completion allowed; prereq Grad student or instr consent ; Credit will not be granted if credit has been received for: PUBH 6281;
Instructor: Fennelly,Katherine
Description: 

PA 5490 Topics in Social Policy
3 credit(s), max credits 9, 3 completions allowed; prereq Grad student or instr consent ;
Instructor: Rolnick,Arthur Jeffrey
Description: Student may contact the instructor or department for information.

PA 5490 Topics in Social Policy
3 credit(s), max credits 9, 3 completions allowed; prereq Grad student or instr consent ;
Instructor: Slawik,Nora B
Description: If you want to learn directly from legislators, early education professionals, economists, lobbyists and other social scientists about state, federal and international policies affecting young children and their families this class is essential. We will explore reports and expert speaker presentations on family, community and institutional roles in promoting children’s social, cognitive and emotional development and their acquisition of language and pre-literacy skills. This course illuminates the gaps between the science of early childhood development and how public policies support young children and their caregivers. Classroom discussions will focus on innovative public policies and financing affecting young children and their physical and mental health care, poverty influences, quality child care, economics, special needs and workforce issues. Graduate students in the areas of early childhood and public policy as well as community members with experience in the early childhood field are the intended audience. This class is the cornerstone of the Early Childhood Policy Certificate program, a postbaccalaureate sequence intended to develop individuals’ capacity to apply research-informed knowledge of early development to federal and state policy affecting children up to age 8.
Style: 20% Lecture, 20% Discussion, 20% Small Group Activities, 10% Student Presentation, 20% Guest Speakers. Experts in the areas related to young children speak regularly on kindergarten readiness, statistical preschool studies, legislation, poverty,economics and workforce issues.
Grading: 40% reports/papers, 10% special projects, 30% written homework, 10% attendance, 10% class participation. Class attendance also weighs into the final grade if the student misses more than two of the weekly classes.

PA 5501 Theories and Policies of Development
3 credit(s); prereq Grad student or instr consent ;
Instructor: Friedemann-Sanchez,Greta
Description: Economic and human development theories/strategies throughout world. Competing theoretical paradigms. Policy debates. Poverty/inequality, rural development, trade policy, health, education, gender, the environment.

PA 5511 Community Economic Development
3 credit(s); prereq Grad or instr consent ;
Instructor: Christenson,Michael Paul
Description: Contexts/motivations behind community economic development activities. Alternative strategies for organizing/developing economic development projects. Tools/techniques for economic development analysis/planning (market analysis, feasibility studies, development plans). Implementation at local level.

PA 5590 Topics in Economic and Community Development
3 credit(s), max credits 9, 3 completions allowed; prereq Grad student or instr consent ;
Instructor: Nelson,Kris S
Description: Course teaches theory and practice of the most current method being used by economic and workforce development in building regional economies = an industry cluster approach. The European Union has utilized a cluster approach for their economic development investments for over a decade (please see the EU Cluster Observatory). The United States does not have a national economic development strategy nor do many individual states. However, the current administration has been embedding their competitive federal grants process with criteria that require states to understand their economies by using a cluster approach. The Department of Labor (DOL), Economic Development Administration (EDA) of the Department of Commerce (DOC), and the Small Business Administration (SBA) are all soliciting grants that incentivize an industry cluster approach in identifying their regional economy. Lee Munnich has been engaged in this cluster work since the mid 1990's and most recently, led the training of 110 State of Minnesota staff in this course, the Microeconomics of Competitiveness: Firms, clusters and economic development. This work has increased state and metro competitiveness for federal grant dollars and has also increased the level of cooperation and collaboration taking place across agencies, systems and geo-political boundaries. Cluster work is both relational/qualitative and quantitative and an essential tool for any graduate student interested in workforce and economic development domestically or internationally. (See syllabus for additional information.)

PA 5601 Survey of Women, Law, and Public Policy in the United States
3 credit(s); prereq Grad or instr consent ;
Instructor: Laughlin,Kathleen Anne
Description: Public policy is gendered. That means the public policies affect men and women differently and that men and
women participate differentially in the public policy making process. Public policies are both an important component in the ongoing construction of gender differences as a site where gender is reproduced and renegotiated. This course explores these claims by engaging with feminist public policy analyses. Locating public policies historically helps us to break down the category women by race, class, sexual orientation, and other mutually constituting categories such as age, rural/urban, parental status, etc. We will consider the causes and consequences of public policies on women's issues; emphasize the place of placing public policy debates and issues in a historical context. Consequently, we will explore in-depth three policy issues: employment, reproductive rights, and welfare reform. Moreover, this course will consider how barriers to women's full citizenship in the past and assumptions of female difference continue to influence politics and policy today. Thus this course will place public policies in the contexts of history, feminist theory, and law, and will consider how feminists engage in legal advocacy and how feminist historians are beginning to analyze the rhetoric of choice. Grades are based on class participation, a reading journal, components of a research paper? annotated bibliography and literature review, and a research paper. Class Time: The course is organized as a seminar and an introduction to research: 70% of class time will be discussion of assigned readings and current events affecting the status of women. 30% of class time will focus on independent research. The class will not meet after Thanksgiving break to accommodate research. Work Load: Approximately 100 pages of reading a week; 30 pages of journal writing a week and 20 pages of a formal writing (literature review and research paper). Grade: 30% Class Participation/Reading Journal; 15% Annotated Bibliography and Research Proposal; 15% Literature Review; 40% Research Paper

PA 5711 Science and Technology Policy
3 credit(s); prereq Grad student or instr consent; Instructor: Kuzma, Jennifer
Description: This course will provide an overview of public policies and issues involving or affected by science and technology (S&T). The breadth of the class precludes a comprehensive coverage of any one subject, but through the themes, subthemes, and issue-based case studies, students will gain a broad understanding of S&T policy, in addition to basic concepts of policy analysis. Overarching themes will include history and evolution of S&T policy; the current system and the interactions and conflicts within and surrounding it; the relationships among citizens, experts, organizations and cultures; R&D support infrastructure and effects on economies and society; and responsible governance of S&T. Various challenges and opportunities for science and technology will be considered within a social context. Sub-themes for the course include national and international funding of R&D; S&T in development; intellectual property and its impacts; contemporary institutional roles; public engagement and participatory processes; ethical and cultural frameworks for S&T policy; capacity building in developing countries; health and well-being of societies and ecosystems as related to S&T; and security in the context of S&T policy. The first half of the course will focus on the general themes and sub-themes, and the second half will focus on particular S&T policy topics to illustrate these themes (genetically engineered organisms, nanotechnology, emerging medical biotechnology, ecology and biodiversity, global health, national biodefense and security).
Style: 30% Lecture, 25% Discussion, 25% Small Group Activities, 10% Student Presentation, 10% Guest Speakers. Grading: 40% reports/papers, 20% written homework, 20% in-class presentation, 20% class participation.

PA 5721 Energy and Environmental Policy
3 credit(s); prereq Grad or instr consent; Instructor: Wilson, Elizabeth Joan
Description: Impact of energy production/consumption choices on environmental quality, sustainable development, and other economic/social goals. Emphasizes public policy choices for energy/environmental challenges between the

PA 5722 Environmental and Resource Economics Policy
3 credit(s); prereq [Intermediate microeconomics, intermediate policy analysis, grad student] or instr consent; Instructor: Easter-Knowles, Jessica
Description: The course emphasizes the economics of natural resource use over time, natural resource scarcity or adequacy, environmental economics and mechanisms for pollution control and their implications for public policy. It will also include study of the use of economic analysis and benefit cost analysis in natural resource and environmental quality decisions made by both the public and private sectors. This course is designed to service two groups: (1) seniors and graduate students in Applied Economics, Public Affairs, Geography, Natural Resources, etc., for whom it is a terminal course, and (2) Applied Economics or Economics students who plan to take ApEc8601 and/or 8602. The course is organized around two lectures per week. However, discussion and questions are encouraged. Readings will be assigned that are on reserve.
Style: 85% Lecture, 15% Discussion.
Grading: 35% mid exam, 35% final exam, 20% reports/papers, 10% problem solving.
Exam Format: Short essay

PA 5802 Global Economic Policy
3 credit(s); prereq Major in [public affairs or public policy] or instr consent; Instructor: Kudre, Robert T
Description: The global economy poses many challenges to nation states and to the aspirations of various national and transnational social groups. This course looks at some of those challenges and the associated policy responses. Only a few of those responses involve formally agreed international rules, and most of those rules lack specific enforcement mechanisms. This is not surprising because most of the policy challenges emerged gradually over time, and nation-states have attempted to deal with them while maintaining as much national prerogative as possible. Much of the story of the governance of the global economy can therefore be seen as mixtures of information sharing and light coordination. Stronger governance such as the World Trade Organization and the International Monetary Fund are exceptions. The course will explore the economic logic of globalization and national policy objectives. It will deal with specific policies and institutions related to international trade (including the WTO and regional pacts such as NAFTA); international finance (including the International Monetary Fund); global aspects of resources and the environment; immigration and emigration; and development (including the UN and the World Bank).

PA 5890 Topics in Foreign Policy and International Affairs
3 credit(s), max credits 40, 8 completions allowed; prereq Grad student or instr consent; Instructor: Johnson, Robbin S
Description: The course examines the effects of markets, governmental policies and the process of globalization on world food, feed and fuel from biomass production. The course begins with a look at why agricultural issues are important both in developed countries and in poorer countries struggling to escape their poverty and hunger. It reviews the kinds of policy choices that are made with respect to agricultural production, international trade and, more recently, biofuels development. It looks at how these issues and the policy choices made with respect to each have evolved. It compares those choices with their effects. And it asks whether alternative policy choices would be better, in what ways and for whom. (See syllabus on Course Guide for more information.)

PA 5890 Topics in Foreign Policy and International Affairs
1-5 credit(s), max credits 40, 8 completions allowed; prereq Grad student or instr consent; Instructor: James, Eric Jon
Description: Student may contact the instructor or department for information.

PA 5910 Developing Your Public Service Career
S-N only, 1 credit(s); prereq Major in [public affairs or public
PA 5920 Skills Workshop
1.5 credit(s), max credits 12, 12 completions allowed; prereq Grad student or instr consent
Instructor: Stone, Paul Clois
Description: This course provides Humphrey students with the knowledge and analytic tools to manage their own career development. Students look at the changing nature of public work and public service career options. They analyze and document their individual interests, skills and abilities and create a career exploration plan. Finally, they meet professionals from a variety of public service careers in a series of panel discussions.
Style: 20% Lecture, 20% Discussion, 20% Small Group Activities, 40% Guest Speakers.
Grading: 50% reports/papers, 50% reflection paper.

PA 5941 Leadership for the Common Good
A-F only, 4 credit(s); prereq [Major in development practice or public affairs] or public affairs leadership certificate or instr consent
Instructor: DeCramer, Gary M
Description: DRAFT Syllabus Spring 11 PA 5941 Leadership for the Common Good Wed. 5:45 pm 9:05 pm Instructor Gary DeCramer Room 241 Humphrey Institute gdecramer@umn.edu office: 612-625-3458 home: 651-886-5535 hours: 4:00 to 5:15 Wednesdays or by appointment Course Goals Understand leadership theories, tools, and strategies of leadership. Understand how policy entrepreneurs develop and manage ideas for achieving the common good. Build a learning community. Assist learners in developing leadership strategies for their own work. Course Design This course is a participatory seminar designed to engage students in study, thought, discussion and reflection on eight capabilities of leadership: Organizational Leadership, Visionary Leadership, Political Leadership, Team Leadership, Integrative Leadership, Organizational Leadership, Visionary Leadership, Political Leadership, Ethical Leadership, and Policy Entrepreneurship. In order to ensure that the course helps learners develop strategies for their own leadership work, everyone develops his or own leadership case throughout the course. Learners are assigned to a study group that typically meets for the hour before each class, or at another time convenient to the members. The groups provide opportunities to: o Review and discuss readings o Focus on learners: leadership cases, using exercises and other assignments o Build learning relationships o Prepare for class sessions Credit Requirements and Grading for A-F Participation -- Attend class and study groups; contribute to discussion. Post bio sketch on web; post study group norms. Turn in evaluations of your study group members; participation. (20%) Reflection Leader: Each person will serve as a reflection leader. (5%) Leadership Case and Class Memos a. Initial leadership case statement. * If instructor requires revisions, a new draft responding to their comments must be posted later. See course website and grid for further guidance. (3%). b. Outline for full leadership case analysis. See course website for further guidance. (7%) c. Class Memo (30%). These readings could be selected so that they contribute to the full leadership case analysis, and can count as outside readings.
for their own leadership work, everyone develops his or own leadership case throughout the course. Learners are assigned to a study group that typically meets for the hour before each class, or at another time convenient to the members. The groups provide opportunities to: o Review and discuss readings o Focus on learners: leadership cases, using exercises and other assignments o Build learning relationships o Prepare for class sessions Credit Requirements and Grading for A-F Participation -- Attend class and study groups; contribute to discussion. Post big sketch on post study group norms. Turn in evaluations of your study group members; participation. (20%) Reflection Leader : Each person will serve as a reflection leader . (5%) Leadership Case and Class Memos a. Initial leadership case statement. * If instructor requires revisions, a new draft responding to their comments must be posted later. See course website and grid for further guidance. (5%). b. Outline for full leadership case analysis. See course website for further guidance. (7%) c. Class Memo (30%). These readings could be selected so that they contribute to the full leadership case analysis, and can count as outside readings.

PA 5941 Leadership for the Common Good A-F only, 4 credit(s); prereq [Major in development practice or public affairs] or public affairs leadership certificate or instr consent ;
Instructor: Shetty, Sudha
Description: Personal, team, organizational, visionary, political, and ethical aspects of leadership. Emphasizes building/experiencing a learning community.

PA 5990 Topics: Public Affairs--General Topics
0-3 credit(s), max credits 9, 6 completions allowed; prereq Grad student or instr consent ;
Instructor: Benasutti, Merrie A
Description: Engaging the Public in Policy and Planning (PA 5990 / PA 8081) was proposed by and developed in consultation with Humphrey Institute students who were interested in community based research and committed to engaging Humphrey Institute and other University of Minnesota students in community-based initiatives to strengthen the Cedar Riverside neighborhood. Since the 2007-2008 academic year when the courses first were offered, students have completed nine different projects with and for neighborhood organizations, including the Brian Coyle Community Center, the Cedar Riverside Neighborhood Revitalization Program, the Somalian American Education Program, the West Bank Business Coalition, and the West Bank Community Coalition.

PA 8001 Transforming Public Policy
A-F only, 4 credit(s); prereq 5941 or instr consent ;
Instructor: Crosby, Barbara C
Description: Development of interdisciplinary understanding of one or more policy areas through explorations of theory, readings, cases, and model-building exercises. Articulating policy/system improvements and leadership implications for formulating/implementing them.

PA 8081 Capstone Workshop
A-F only, 3 credit(s), max credits 6; prereq [Grad major in [public affairs or public policy or [urban and regional planning] or [science, technology, and environment policy]], completion of core courses] or instr consent ;
Instructor: Fox, Jeannie
Description:

PA 8201 Environment and Infrastructure Planning
A-F only, 4 credit(s); prereq [Urban and regional planning] grad student or instr consent ;
Instructor: Pitt, David George
Description: Relationship between infrastructure, human settlement, and design. Natural resource systems as foundation of infrastructure provision. Environmental basis of, and political/legal/institutional frameworks for, land-use planning. Parallel computer lab, practicum assignment.

PA 8203 Neighborhood Revitalization Strategies and Theories
A-F only, 4 credit(s); prereq [Urban and regional planning] grad student or instr consent ;
Instructor: Nelson, Ken S
Description: This course focuses on the planning issues surrounding the revitalization of urban neighborhoods in the United States. More specifically, it deals with "place-based" programs of community development (CD) that combine physical development, social service provision, and community organizing. The course begins with an assessment of current thinking about poverty in urban areas and the decline of central city neighborhoods. We will consider frameworks for understanding urban neighborhoods as well as the concept of "social capital" and how it applies to CD efforts, and the role it plays in current CD policymaking. We will examine various elements of community development, including social policy and the roles in neighborhood revitalization of housing, small businesses, city governments, neighborhood associations, advocacy organizations, social services, workforce development programs, schools, religious institutions, financial institutions, community crime prevention, historic preservation, the arts, and so on. The course also covers the activities of community development corporations (CDCs), non-profit organizations that provide both physical and social development services to central city neighborhoods.

PA 8290 Advanced Topics in Planning
1-3 credit(s), max credits 6;
Instructor: Donath, Max
Description:

PA 8302 Applied Policy Analysis
A-F only, 4 credit(s); prereq Intermediate microeconomics, introduction to econometrics;
Instructor: Myers Jr, Samuel L
Description: Design/evaluation of public policies. Emphasizes market/non-market contexts. Microeconomics and welfare economics of policy analysis. Econometric tools for measurement of policy outcomes. Applications to policy problems.

PA 8390 Advanced Topics in Advanced Policy Analysis
Methods
2 credit(s), max credits 6;
Instructor: Kleiner, Morris M
Description: Syllabus will be updated. Some of the readings and topics are likely to change.

PA 8790 Advanced Topics in Science, Technology, and Environmental Policy
1-3 credit(s), max credits 6;
Instructor: Kuzma, Jennifer
Description: This course will take an interdisciplinary approach to examining the legal, public policy, social, economic, and ethical implications of nanotechnology. The course will explore the need to develop public policies for nanotechnology from the perspective of different stakeholders (federal agencies, the public, industry, the environment, international organizations, etc.) and examine and contrast different statutory objectives and regulatory strategies. The course will also draw on a diverse set of guest speakers and readings and will expose students to different types of policy problems. Students will explore different research methodologies used in the various disciplines that study ethical, legal, and social issues. Because nanotechnology is also a uniquely interdisciplinary field, requiring collaboration between scientists and engineers in virtually all the science disciplines, as well as social scientists, ethicists, lawyers, and policy analysts, enrollment by students with a broad range of interests is encouraged.

PA 8821 National Security Policy
3 credit(s);
Instructor: Andreasen, Steven Peter
Description: Politics and economics of national security policy. Defense policy, military strategy, and weapons procurement. While emphasis is on the United States, other countries also...
PA 8991 Independent Study  
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent  
Instructor: Bloomberg PhD,Laura L  
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study  
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent  
Instructor: Kuźma,Jennifer  
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study  
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent  
Instructor: Friedemann-Sanchez,Greta  
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study  
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent  
Instructor: Jacobs,Larry  
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study  
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent  
Instructor: Fennelly,Katherine  
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study  
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent  
Instructor: Bryson,John M  
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study  
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent  
Instructor: Swackhamer,Deborah L  
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study  
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent  
Instructor: Myers Jr,Samuel L  
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study  
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent  
Instructor: Crosby,Barbara C  
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study  
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent  
Instructor: Slotterback,Carissa Schively  
Description: Student may contact the instructor or department for information.

Instructor: Levison,Deborah  
Description: Student may contact the instructor or department for information.

Instructor: Goetz,Edward Glenn  
Description: Student may contact the instructor or department for information.

Instructor: Kleiner,Morris M  
Description: Student may contact the instructor or department for information.

Instructor: Stone,Paul Clois  
Description: Student may contact the instructor or department for information.

Instructor: Kudrle,Robert T  
Description: Student may contact the instructor or department for information.

Instructor: Assaad,Ragui A  
Description: Student may contact the instructor or department for information.

Instructor: Hanratty,Maria J  
Description: Student may contact the instructor or department for information.

Instructor: Cao,Jason  
Description: Student may contact the instructor or department for information.

Instructor: Sandfort,Jodi R.  
Description: Student may contact the instructor or department for information.

Instructor: Kiedrowski EdD,P. Jay  
Description: Student may contact the instructor or department for information.
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent ;
Instructor: Wilson, Elizabeth Joan
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent ;
Instructor: Temple, Judy
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent ;
Instructor: Zhao, Zhirong Jerry
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent ;
Instructor: Allen, Ryan Patrick
Description: Student may contact the instructor or department for information.

PA 8991 Independent Study
0.5-3 credit(s), max credits 6, 6 completions allowed; prereq instr consent ;
Instructor: Cohen, Dara Kay
Description: Student may contact the instructor or department for information.

Public Health
A-302 Mayo (Box 197)

PUBH 1005 Sleep, Eat, and Exercise
1 credit(s); prereq [Undergrad or PSEO] student; 
Instructor: Kjolhaug, Jerri Rae
Description: <html> <title>PubH 1005</title> <style> <!-- .video { text-align:center; } --> video { text-align:center; } </style></head> <body> <p>This course is intended for undergraduate students who are undecided in their major, intend to proceed in a major or minor concentration in one of the main topic areas, want help achieving/maintaining a healthy lifestyle, and/or want experience taking an online course.</p> <p>Students must have access to a computer and the Internet and should have basic computing skills. To self-assess your readiness for e-learning and learn tips for successful e-learning, go to: http://digitalcampus.umn.edu/resources/onlinelearningassessment.html</p> <p>Students should contact the instructor, Jerri Kjolhaug (<a href="mailto:wach0041@umn.edu">wach0041@umn.edu</a>), with any questions or concerns. Emails should be sent from U of M email accounts. <p>Students should contact the instructor, Jolynn Gardner (<a href="mailto:gardner@umn.edu">gardner@umn.edu</a>) with any questions or concerns. Emails should be sent from U of M email accounts.</p> <p>Description: Students should contact the instructor, Jolynn Gardner (<a href="mailto:gardner@umn.edu">gardner@umn.edu</a>) with any questions or concerns. Emails should be sent from U of M email accounts.</p> <p>Description: Students should contact the instructor, Jolynn Gardner (<a href="mailto:gardner@umn.edu">gardner@umn.edu</a>) with any questions or concerns. Emails should be sent from U of M email accounts.</p> <p>Description: Students should contact the instructor, Jolynn Gardner (<a href="mailto:gardner@umn.edu">gardner@umn.edu</a>) with any questions or concerns. Emails should be sent from U of M email accounts.</p> <p>Description: Students should contact the instructor, Jolynn Gardner (<a href="mailto:gardner@umn.edu">gardner@umn.edu</a>) with any questions or concerns. Emails should be sent from U of M email accounts.</p> <p>Description: Students should contact the instructor, Jolynn Gardner (<a href="mailto:gardner@umn.edu">gardner@umn.edu</a>) with any questions or concerns. Emails should be sent from U of M email accounts.</p> <p>Description: Students should contact the instructor, Jolynn Gardner (<a href="mailto:gardner@umn.edu">gardner@umn.edu</a>) with any questions or concerns. Emails should be sent from U of M email accounts.</p> <p>Description: Students should contact the instructor, Jolynn Gardner (<a href="mailto:gardner@umn.edu">gardner@umn.edu</a>) with any questions or concerns. Emails should be sent from U of M email accounts. <p>This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at <a href="http://onestop.umn.edu">http://onestop.umn.edu</a>. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule. 401
via the WebVista course site. Lessons can be read and/or listened to via the computer, printed in text format, or downloaded in mp3 format. Coursework requires an average of 3 hours per week over 15 weeks.

Grading: 45% quizzes, 55% written homework.

PUBH 3001 Personal and Community Health
2 credit(s);
Instructor: Farley,Dana Mark
Description: Introduction to scientific, socio-cultural, and attitudinal aspects of communicable and degenerative diseases, environmental and occupational health hazards, alcohol and drug problems; emphasis on role of education in health conservation, disease control, and drug use. The full syllabus for the course, including lecture outlines, textbook and exam information, can be found at the course URL listed below.
Style: 100% Lecture
Grading: 40% final exam, 10% reports/papers, 25% other evaluation, on each of two mid-term exams
Exam Format: Multiple choice, fill-in-the-blank, short answer

PUBH 3003 Fundamentals of Alcohol and Drug Abuse
2 credit(s); Credit will not be granted if credit has been received for: PUBH 3004;
Instructor: Farley,Dana Mark
Description: Lecture and special readings on the scientific, sociocultural and attitudinal aspects of alcohol and other drug problems, with special emphasis on incidence, prevalence, high risk populations, prevention, and interventions. The full syllabus for the course, including lecture outlines, textbook and exam information, can be found at -a href="http://www.epi.umn.edu/academic/syllabi.shtm">http://www.epi.umn.edu/academic/syllabi.shtm</a>
Style: 100% Lecture
Grading: 40% final exam, 10% reports/papers, 50% other evaluation. two midterms exams (25% each)
Exam Format: multiple choice

PUBH 3004 Basic Concepts in Personal and Community Health
4 credit(s); prereq credit will not be granted if credit has been received for: 3001; Credit will not be granted if credit has been received for: PUBH 3003;
Instructor: Farley,Dana Mark
Description: Lecture and special readings on the scientific, sociocultural and attitudinal aspects of communicable and degenerative diseases. This course includes environmental and occupational health hazards and alcohol and drug problems, with an emphasis on the roles of education and prevention.
Style: 100% Lecture
Grading: 40% final exam, 10% reports/papers, 50% other evaluation, four midsemester exams (12.5% each)
Exam Format: Multiple choice, short answer

PUBH 3010 Public Health Approaches to HIV/AIDS
2 credit(s); Credit will not be granted if credit has been received for: PUBH 6010;
Instructor: Horvath,Keith J.
Description: The purpose of this undergraduate level course is to learn more about HIV/AIDS, with an emphasis on primary prevention (preventing HIV infection in those who are uninfected), secondary prevention (preventing development of HIV disease in those who are HIV-infected), and tertiary prevention (preventing morbidity and mortality in those with HIV disease). A significant focus of this course will be on community responses to HIV/AIDS, including social, medical, and political. This focus acknowledges the unique role of the community in structuring our response to HIV/AIDS historically and today.

PUBH 3040 Dying and Death in Contemporary Society:
Implications for Intervention
2 credit(s); prereq Jr or sr or instr consent ; Credit will not be granted if credit has been received for: PUBH 6040;
Instructor: Gardner,Jolyn
Description: Basic background information will be presented on concepts, attitudes, ethics and lifestyle management in relation to dying, death, grief and bereavement. Emphasis will be placed on the intervention and educational aspects of the above topics for community health and helping professionals and educators. Students should contact the instructor, Jolynn Gardner, if a permission number is needed. (gardner@umn.edu)
Style: 100% Lecture. Some of the lectures are given by guest speakers from various fields relevant to the course topics.
Grading: 50% mid exam, 20% final exam, 30% reports/papers.
Exam Format: The two Midterm Exams are taken during class time. The Final Exam is a take-home exam. All exams are in short answer format.

PUBH 3050 Practicum in Peer Education I
A-F only, 2 credit(s); prereq [Upper div student, [demonstrated hth sci or hth ed interests], [3001 or Concurrent registration is required (or allowed) in 3001 or 3004 or Concurrent registration is required (or allowed) in 3004]], instr consent
Instructor: Toomey,Traci Louise
Description: Student may contact the instructor or department for information.

PUBH 3100 Making Sense of Health Studies
2 credit(s);
Instructor: Maldonado,George
Description: <p>Every day we get reports about the latest health research on television news, in newspapers, in magazines, in books. We are bombarded by television commercials that keep us up to date on the latest drugs, their uses and their side effects. Informercials extol the virtues of medical devices and medical treatments. We are always told to, "Ask your doctor". And, of course, there is the Internet--"Dr. Google" is where patients now routinely get their second (or even third) opinion. This course will teach you how to critically evaluate health news (and the research reports on which they are based) to make good, well-informed decisions about your health and well-being. </p>
In addition, this course will teach you how to conduct your own personal (N-of-1) studies to find out what health strategies work for you (for example, what weight-loss tips work for you personally).</p> <p>All of this will be done in the context of recent news reports that are of interest to college students.</p> <p>This is a self-contained class with no prerequisites. No previous background in math or statistics is needed.</p> <p>All of this will be done in the context of recent news reports that are of interest to college students.</p> <p>This is a self-contained class with no prerequisites. No previous background in math or statistics is needed.</p>
Style: 100% Lecture
Grading: 30% homework, 20% quizzes, 50% other evaluation (quizzes, papers, reports). 
Grading: 45% quizzes, 55% written homework.

PUBH 3102 Issues in Environmental and Occupational Health
3 credit(s); Credit will not be granted if credit has been received for: PUBH 6102;
Instructor: Allwood,Paul 
Bancroft
Description: This course is intended as an introduction to the field, current topics, and methods to control environmental health issues. The intent is to have you become sensitized to environmental health issues that are affecting you and your community, and which you and your community, may be affecting in turn. We all live out our lives in an environment, and, whether we are aware of it or not, are constantly modifying our environment to protect our lives and the lives of others. Similarly, we are the beneficiaries of the hidden efforts of environmental health specialists and others whose work makes our lives safer and more healthful. It is the intent of this course to assist the student in becoming aware of the scope of the field of environmental health, becoming familiar with the concepts upon which environmental interventions are based, and to practice consulting the environmental health literature to identify appropriate interventions for community environmental health problems and practice identifying such problems and specifying...
interventions in their own community. The focus is on the interaction of humans and the environment and how this interaction affects the health of communities. Course content will be presented in a password-protected site on the Internet with no face-to-face attendance on campus required. However electronic attendance will be taken and students are expected to do all online modules and activities as presented.

**Style:** Online delivery of course; This course is offered in an online learning environment only.

**Grading:** 50% reports/papers, 20% quizzes, 20% class participation, 10% other evaluation. Pre and Post Tests (The actual test score does not matter but completing the tests accounts for 10% of total)

**PUBH 3104 Environmental Health Effects: Introduction to Toxicology**

2 credit(s); prereq Basic science coursework; undergrad coursework in [biology, chemistry, biochemistry] recommended; Credit will not be granted if credit has been received for: PUBH 6104;

**Instructor:** Wattenberg, Elizabeth Vaughn

**Description:** Student may contact the instructor or department for information.

**PUBH 3202 What is Public Health?**

OPT No Aud, 2 credit(s);

**Instructor:** Ehrenberg, Anne

**Description:** The online course will provide a broad overview of the public health system - what it is, its origins and evolution and how it is structured and administered at the federal, state and local levels in the United States. In addition it will provide a broad framework for understanding the mission, key concepts, principles and practices of population-based public health practice. Through the use of case studies, students will have an opportunity to see how the concepts may be applied. This course will not substitute for PubH 3001/3004.

**Grading:** 20% final exam, 50% reports/papers, 20% class participation, 10% other evaluation. critique of fellow student’s paper

**Exam Format:** multiple choice

**PUBH 3315 Clinical Research from Lab to Bedside to Populations**

A-F only, 2 credit(s); prereq General biology course, general chemistry course;

**Instructor:** Luepker MD, Russell V

**Description:** Course Description This course is intended to provide a basic understanding of health research in humans. It describes research methods, contemporary topics, controversies and health careers in the field. The course includes perspectives from dentistry, medicine, nursing, pharmacy and public health. It is intended for students considering a health career. Course Goals and Objectives A. An understanding of research methods for health studies in individuals and populations. B. An understanding of the controversial questions in human health through specific examples and the different approaches to answering these questions through clinical research. C. A recognition of potential careers in health research.

**PUBH 3900 Topics: Public Health Nutrition**

1-6 credit(s), max credits 12; prereq Undergrad student;

**Instructor:** Laeka, Melissa Nelson

**Description:** Student may contact the instructor or department for information.

**PUBH 3905 Nutrition for Public Health Promotion and Disease Prevention**

2 credit(s); prereq Jr or sr or instr consent ; Credit will not be granted if credit has been received for: PUBH 6905;

**Instructor:** Laska, Melissa Nelson

**Description:** This course covers nutrition topics of contemporary interest. Concepts/facts about science of human nutrition are discussed in relation to personal/community nutrition problems/concerns. This is an applied introductory course with labs.

**Style:** 30% Lecture, 15% Discussion, 40% Laboratory, 15% Guest Speakers. The course is structured as a weekly seminar with about an hour of lecture and an hour of lab work and small group activities. Discussion topics will be integrated throughout the course.

**Grading:** 30% mid exam, 30% final exam, 25% special projects, 15% laboratory evaluation.

**PUBH 6003 Fundamentals of Alcohol and Drug Abuse for Teacher Education**

1 credit(s); prereq Master of education student or instr consent ; Credit will not be granted if credit has been received for: PUBH 3003;

**Instructor:** Farley, Dana Mark

**Description:** This web-based course consists of 17 lessons on the scientific, socio-cultural, and attitudinal aspects of alcohol and other drug abuse problems. Special emphasis is placed on the incidence and prevalence of drug and alcohol abuse, as well as on high-risk populations, prevention issues, and interventions. The course is intended primarily for teachers to meet licensure requirements. Prerequisites: M.Ed. student or Addiction Studies student. Credit will not be granted if credit has been received for: PUBH 6003, PUBH 5023, PUBH 5003, PUBH 3033, PUBH 3032, PUBH 3005, PUBH 3004, PUBH 3003, PUBH 3002.

**Style:** 100% Web Based. This is NOT an independent study course; there are due dates.

**Grading:** 30% reports/papers, 32% quizzes, 38% written homework. This is a web-based course. All quizzes, assignments, and the final paper are submitted online.

**PUBH 6010 Public Health Approaches to HIV/AIDS**

3 credit(s); prereq Grad student or professional school student or instr consent ; Credit will not be granted if credit has been received for: PUBH 3010;

**Instructor:** Horvath, Keith J.

**Description:** Student may contact the instructor or department for information.

**PUBH 6020 Fundamentals of Social and Behavioral Science**

A-F only, 3 credit(s), max credits 6; prereq Public health [MPH or MHA or certificate] student or health journalism MA major or instr consent ;

**Instructor:** Lando, Harry A

**Description:** Student may contact the instructor or department for information.

**PUBH 6020 Fundamentals of Social and Behavioral Science**

A-F only, 3 credit(s), max credits 6; prereq Public health [MPH or MHA or certificate] student or health journalism MA major or instr consent ;

**Instructor:** Nelson, Toben F

**Description:** Student may contact the instructor or department for information.

**PUBH 6035 Applied Research Methods**

3 credit(s); prereq [6414 or 6450 or equiv], [6034 or 6806 or equiv], [CHE or PubH Nutr] major or instr consent ; 6420 recommended;

**Instructor:** Henrikus, Deborah Jane

**Description:** The purpose of this course is to teach basic research skills and concepts needed to plan, conduct, and analyze data from a research project. Skills including performing literature searches; questionnaire development; scale construction; item analysis; data coding, entry and analysis; and report writing will be taught. Through the semester, students will develop a research question, devise and implement a brief survey to address that question, analyze their survey data using STATA statistical software, and write a report. Most of the class and lab activities will focus on the steps involved in completing this project. Students will also be given a chance to develop their STATA data management and analysis skills using existing datasets.

**Style:** 50% Lecture, 5% Discussion, 25% Laboratory, 15% Small Group Activities, 5% Student Presentation.

**Grading:** 40% reports/papers, 48% written homework, 5% in-class presentation, 7% class participation.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
University of Minnesota - Course Guide for Twin Cities Campus  

Fall 2011

PUBH 6050 Community Health Theory and Practice I  
3 credit(s); prereq Community health education major or instr consent;  
Instructor: Sherwood,Nancy Elizabe  
Description: Student may contact the instructor or department for information.

PUBH 6066 Building Communities, Increasing Health: Preparing for Community Health Work  
2 credit(s); prereq Public health student or grad student or instr consent;  
Instructor: Axtell,Sara Ann  
Description: Student may contact the instructor or department for information.

PUBH 6076 Public Health Policy as a Prevention Strategy  
2 credit(s); prereq 2nd yr MPH or public health MS student or [Epi, Biostats, Env Hlth, HSRC] Concurrent registration is required (or allowed) in A PhD student or instr consent;  
Instructor: Forster,Jean  
Description: Student may contact the instructor or department for information.

PUBH 6101 Environmental Health  
A-F only, 2 credit(s); prereq Public health [MPH or MHA or certificate] student or instr consent;  
Instructor: Toscano Jr,William A  
Description: This course explores the interaction between the environment and humans. The enivrome covers all aspects of the environment including physical, psychosocial, nutritional and chemical environment. How the environment affects human health is discussed. Principles of environmental health relating to macro and micro environments and products consumed or used by people. Global climate change and its effects on human health are discussed.  
Style: 50% Lecture, 10% Small Group Activities, 30% Student Presentation, 10% Guest Speakers.  
Grading: 50% reports/papers, 10% attendance, 25% in-class presentation, 15% class participation.

PUBH 6103 Exposure to Environmental Hazards  
A-F only, 2 credit(s);  
Instructor: Raynor, Peter Cameron  
Description: People come into contact with many potentially hazardous chemical, biological, and physical agents in the home, work, and outdoor environments. Exposure is a quantitative measure of the contact between a person and a potentially hazardous agent. In this course, students will learn how to recognize potential exposures in a variety of settings and how to evaluate those exposures. Class sessions will be in a traditional lecture format. Course grades will be based on written responses to the readings assigned for each class session, homework assignments, and an individual poster project on human exposure to one of a variety of agents of interest.

PUBH 6104 Environmental Health Effects: Introduction to Toxicology  
A-F only, 2 credit(s); prereq Basic science coursework; undergrad coursework in [biology, chemistry, biochemistry] recommended; Credit will not be granted if credit has been received for: PUBH 3104;  
Instructor: Wattenberg, Elizabeth Vaughn  
Description: Student may contact the instructor or department for information.

PUBH 6115 Worker Protection Law  
1 credit(s); prereq credit will not be granted if credit received for: 5110;  
Instructor: Austin,Michael L  
Description: How do we protect workers? We will focus on the role of government in protecting rights of citizens. Labor movement history will serve as a starting point for a discussion of modern systems for protecting workers from unsafe work places and compensating them for injuries that do occur. Law will be reviewed that protects individuals against class based discrimination and creates a ‘right’ to work. II. Learning

Objectives At the end of this course, students should be able to:  
"Discuss the history of worker protection law "Discuss the role of government in protecting the safety and well being of citizens "Discuss legal issues underlying several worker protection policies "Discuss the legal basis for compensation for injuries to health and property, and its application to worker protection "Demonstrate techniques of persuasive legal research, writing and oral presentation Ill. Methods of Instruction and Work Expectations Students are encouraged to introduce issues of current interest from the media or from their workplace for discussion. These issues will be incorporated into the curriculum when appropriate. Through lecture and discussion, we will review public law that focuses on the role of government in protecting the safety and well being of citizens. Review of labor movement history will serve as a starting point for a discussion of modern systems for protecting workers from unsafe work places and compensating them for injuries that occur. In addition, we will review law that protects individuals against class based discrimination and creates a ‘right’ to work. Each week students will write a short paragraph or one page outline that answers a question based on the reading assignment. Each student will conduct legal research and write five pages on the legal aspects of an environmental or public health problem. A rough draft must be submitted for review with the instructor before a final draft is submitted. The paper must advocate a public policy that might solve the problem, and include at least 10 primary references. Each student will prepare and present a 6-8 minute persuasive speech in class based on the legal research and writing project. Students will critique each other. Students will work in groups and prepare a classroom presentation regarding a public policy issue. Groups will research issues, identify stakeholders and advocate solutions. Presentations will be made from the perspectives of the various stakeholders. An outline of research materials with at least 10 primary references must be submitted.  
Style: 70% Lecture, 25% Discussion, 5% Student Presentation.  
Grading: 50% reports/papers, 30% written homework, 20% in-class presentation.

PUBH 6131 Working in Global Health  
2 credit(s);  
Instructor: Berthold, Peter  
Description: The content covers 4 main themes that are woven, explicity and implicitly, throughout the presentations. 1. Health Around the World. A current description of global health trends; globalization and its effects on human health; the demographic shift and growth of chronic disease prevalence in developing countries, emerging infectious disease threats; local /global? health issues among immigrant populations. 2. Health, Politics, and Policies. Relationships between economic development; war and health; women’s health and economic development; food distribution and nutrition as a political issue; global aid and its level of long-term impact. 3. Health of the Planet. Trends in global environmental health; and effects of natural and man-made coming disasters. 4. Health and Culture. The role of culture in health issues; the importance of a culturally acceptable involvement in health and health care, and importance of traditional healers (complementary and alternative medicine).  
Grading: 40% final exam, 30% reports/papers, 30% in-class presentation.  
Exam Format: Multiple choice

PUBH 6132 Air, Water, and Health  
A-F only, 2 credit(s);  
Instructor: Simick, Matt  
Description: Student may contact the instructor or department for information.

PUBH 6164 Toxicological Analysis  
A-F only, 2 credit(s); prereq Enrollment in toxicology concentration of Environmental Health PhD program, instr consent;  
Instructor: Peterson, Lisa Ann  
Description: Student may contact the instructor or department for information.

PUBH 6170 Introduction to Occupational Health and Safety  

PUBH 6176 Hazardous Materials and Waste Management
2 credit(s); prerequisite [6170, courses in [chemistry, organic chemistry] or equiv] or instructor consent;
Instructor: Brosch, Lisa M
Description: Student may contact the instructor or department for information.

PUBH 6190 Environmental Chemistry
3 credit(s); prerequisite One course each in [gen chem, org chem] or instructor consent;
Instructor: Simick, Matt
Description: Student may contact the instructor or department for information.

PUBH 6200 Topics: Foundations of Interprofessional Communication and Collaboration
S-N only, 0.5–4 credit(s), max credits 80, 20 completions allowed; prerequisite [MHA or MPH or MS] student;
Instructor: Nerney, Mary Ellen
Description: Student may contact the instructor or department for information.

PUBH 6301 Fundamentals of Clinical Research
3 credit(s); prerequisite Clinical Research major or instructor consent; Credit will not be granted if credit has been received for: PUBH 6305;
Instructor: Luepker MD, Russell V
Description: This course is intended to provide a foundation for the more advanced study that is necessary to become an accomplished clinical research investigator. This course will review the concepts that underlie successful clinical research design, implementation, and reporting. This course will also expose students to the resources and opportunities available to support clinical research at the academic health center.
Style: 40% Lecture, 10% Discussion, 50% Guest Speakers.
Grading: 20% mid exam, 30% final exam, 50% written homework.

PUBH 6302 Fundamentals of Epidemiology
A-F only, 3 credit(s); prerequisite AHC or health journalism student or instructor consent;
Instructor: Punyko, Judy
Description: Student may contact the instructor or department for information.

PUBH 6325 Data Processing with PC-SAS
1 credit(s); prerequisite [Grad-level biostatistics course, [grad student or PubH student]] or instructor consent;
Instructor: Oakes, Michael
Description: Student may contact the instructor or department for information.

PUBH 6341 Epidemiologic Methods I
A-F only, 3 credit(s), max credits 6; prerequisite AHC student or instructor consent;
Instructor: Kulasingam, Shalini L
Description: Description: Epidemiologic Methods I is a combination of a subject matter science and research methodology. Epidemiologic Methods I focuses on the latter component. The course introduces the study designs applied to human populations, including randomized trials and four types of observational studies (cohort, case-control, cross-sectional, ecological). Because cause-and-effect relations are at the heart of epidemiologic research, numerous related topics are taught in Epidemiologic Methods I including causal inference, bias, and effect modification.
Style: 70% Lecture, 20% Discussion, 10% Small Group Activities.
Grading: 48% mid exam, 28% final exam, 24% written homework. 8 homework assignments (3 pts ea) Exam 1 (24%): First 1/3 the course Exam 2 (24%): Cumulative with emphasis on material covered in middle 1/3 Exam 3 (28%): Cumulative with emphasis on material covered in final 1

PUBH 6343 Epidemiologic Methods III
4 credit(s); prerequisite [6342, 6451] with a grade of at least B- or instructor consent;
Instructor: Schreiner, Pamela Jean
Description: Epidemiologic Methods III provides instruction in the analysis and interpretation of data from various epidemiologic study designs. SAS is used to demonstrate epidemiologic and statistical concepts in data analysis. The course is required for all M.P.H. students in Epidemiology. Prerequisites include PubH 6342 (Epidemiologic Methods II) and PubH 6452 (Biostatistics II). Permission of the instructor is needed for substitutions or exemptions. Upon completion of this course, students will be able to: 1) Describe the research hypotheses that are appropriate for cross-sectional studies, case-control studies, and cohort studies; 2) Describe the rationale underlying the major techniques used to analyze data from epidemiologic studies; 3) Know how to interpret data from various analyses of epidemiologic data; 4) Explain how interactions, confounders and dose-response relations among variables are examined; and 5) Use basic SAS procedures to analyze data from epidemiologic studies.
Style: 100% Lecture.
Grading: 50% mid exam, 30% final exam, 20% written homework. Exams are similar in content and structure to homework assignments and in-class exercises.
Exam Format: In-class exams with formulae provided.

PUBH 6346 Writing Research Grants
S-N only, 2 credit(s); prerequisite [6341 or 8300], [6450 or 7401], [Epidemiology PhD or Clinical Research MS student] or instructor consent;
Instructor: Pereira PhD, Mark A
Description: Student may contact the instructor or department for information.

PUBH 6355 Pathophysiology of Human Disease
4 credit(s); prerequisite Epidemiology major or public health nutrition major or instructor consent;
Instructor: Oberg MD, Charles N
Description: This course presents a compendium of human diseases relevant to the public health professional. The material will be presented from an epidemiologic perspective that focuses on disease prevalence, incidence, morbidity and mortality, risk factors, and prevention strategies. It will emphasize mechanisms of development (pathogenesis), and progression, pathophysiologic associations with risk factors, structural alterations (morphologic changes) resulting from the disease, and the functional consequences of these structural changes (clinical significance).

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
PUBH 6380 Ecology of Infectious Diseases
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: CMN 5180
Instructor: Singer, Randall
Description: Student may contact the instructor or department for information.

PUBH 6381 Genetics in Public Health
2 credit(s); prereq Grad student or professional school student or instr consent
Instructor: Demerath, Ellen Wrchota
Description: This course will provide an introduction to public health genetics. Topics will include an overview of human genetic and genomic variation, study designs and methods used in gene discovery and gene characterization, gene-environment interaction, epigenetics, genetic testing in public health, and the ethical, social, and legal implications of genetic testing and genomic research. Diseases of primary focus will include cancers, obesity, diabetes, and cardiovascular disease, but will also include coverage of other diseases of interest to the class. A collaborative learning environment is encouraged, in which the students as well as the instructor actively contribute their experience and knowledge to the class.
Style: 40% Lecture, 20% Discussion, 20% Student Presentation, 20% Guest Speakers.
Grading: 25% mid exam, 25% reports/papers, 25% written homework, 10% attendance, 15% in-class presentation.

PUBH 6386 Public Health Aspects of Cardiovascular Disease
2 credit(s); prereq [[6330 or 6341], 6450, epidemiology major] or instr consent
Instructor: Folsom, Aaron R
Description: This course covers the epidemiology and prevention of cardiovascular disease (CVD). Focus is on epidemiological methods related to CVD, established and novel risk factors, national data sources, approaches to and national recommendations for CVD prevention. Controversies in CVD epidemiology and prevention are covered. The course is designed for epidemiology majors and those in related health fields. Basic epidemiology and statistics courses are pre-requisites. Learning objectives are 1) to understand the descriptive epidemiology of CVD and CVD risk factors, 2) to be able to interpret CVD epidemiologic data, 3) to become familiar with methods used in this field, and 4) to understand individual and population approaches to CVD prevention.
Style: 75% Lecture, 15% Discussion, 5% Small Group Activities, 6% Guest Speakers, 1% Web Based. Discussion includes critiquing articles
Grading: 10% mid exam, 40% final exam, 45% written homework, 5% in-class presentation.
Exam Format: Exams usually are take-home essay writing.

PUBH 6389 Nutritional Epidemiology
2 credit(s); prereq [[6320 or 6330 or 6341], [Epidemiology MPH or Public Health Nutrition MPH or Epidemiology PhD student]] or instr consent
Instructor: Harnack, Lisa Joan
Description: The course is designed to provide the student with familiarity with the design, conduct, analysis, and interpretation of epidemiologic studies related to nutrition. At the conclusion of this course students will be able to: 1) Select the most appropriate dietary intake assessment method for a given research question, epidemiologic study design, and study population; 2) Identify the strengths and limitations of each dietary intake assessment methodology currently available, and understand the implications of the limitations of each method on study results; 3) Select the most appropriate epidemiologic study designs for various nutrition-related research questions by taking into account the strengths and limitations of various designs in relation to specific nutrition research questions; and 4) Describe the data analysis and interpretation issues of special importance in nutritional epidemiology studies.
Style: 75% Lecture, 10% Discussion, 15% Small Group Activities.
Grading: 40% final exam, 20% special projects, 40% written homework.
Exam Format: Take home open book exam

PUBH 6390 Topics: Epidemiology: Epidemiology of Global Health
2 credit(s), max credits 80, 20 completions allowed;
Instructor: Lifson, Alan Raymond
Description: Student may contact the instructor or department for information.

PUBH 6414 Biostatistical Methods I
A-F only, 3 credit(s); prereq Public Health [MPH or certificate] student or [environmental health [MS or PhD] or health journalism MA or health informatics [MS or PhD]] major or instr consent; Credit will not be granted if credit has been received for: PUBH 6450;
Instructor: Brealey Ann M.
Description: Student may contact the instructor or department for information.

PUBH 6414 Biostatistical Methods II
A-F only, 3 credit(s); prereq Public Health [MPH or certificate] student or [environmental health [MS or PhD] or health journalism MA or health informatics [MS or PhD]] major or instr consent; Credit will not be granted if credit has been received for: PUBH 6450;
Instructor: Telke, Susan Elizabe
Description: Student may contact the instructor or department for information.

PUBH 6420 Introduction to SAS Programming
1 credit(s); prereq Health sciences grad student or instr consent
Instructor: Grandits, Gregory Alan
Description: Student may contact the instructor or department for information.

PUBH 6450 Biostatistics I
A-F only, 4 credit(s); prereq [College-level algebra, health sciences grad student] or instr consent; Credit will not be granted if credit has been received for: PUBH 6414;
Instructor: Mugglin, Andrew Scott
Description: Student may contact the instructor or department for information.

PUBH 6470 SAS Procedures and Data Analysis
3 credit(s); prereq [6450, 6451] or [7405, 7406] or [Stat 5101, Stat 5102];
Instructor: Thomas, William
Description: PUBH 6470 introduces students with a background in statistics to programming, graphics, and data analysis using SAS. The course concentrates on nuts-and-bolts programming using PC-SAS, data editing and reformatting, as well as statistical applications. Applications will include: general linear models, nonparametric smoothing, logistic regression, proportional hazards regression, plus bootstrap methods, and methods for repeated measurements of continuous and categorical outcomes. Homework exercises involve both data cleaning and data analysis.
Style: 70% Lecture, 30% Laboratory.
Grading: 30% mid exam, 30% final exam, 40% written homework.

PUBH 6541 Statistics for Health Management Decision Making
3 credit(s); prereq Health care admin student or instr consent
Instructor: Abraham, Jean Marie
Description: Student may contact the instructor or department for information.

PUBH 6542 Management of Health Care Organizations
A-F only, 3 credit(s); prereq Health care admin student;
Instructor: Begun, James Warren
Description: Student may contact the instructor or department for information.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Completions Allowed</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBH 6553</td>
<td>Health Care Management Ethics</td>
<td>1-4</td>
<td>20</td>
<td>MPH or MHA or certificate student or instr consent; A-F only, 1 credit(s)</td>
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<tr>
<td>PUBH 6556</td>
<td>and Health Systems</td>
<td>2</td>
<td>2</td>
<td>A-F only, 2 credit(s); Instructor: Christianson, Jon B</td>
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<tr>
<td>PUBH 6558</td>
<td>Health Finance II</td>
<td>3</td>
<td>2</td>
<td>Instructor: McCullough, Jeffrey S; prereq [[Health care admin or PubH admin/policy] student, familiarity with computerized spread-sheets] or instr consent; A-F only, 2 credit(s)</td>
</tr>
<tr>
<td>PUBH 6560</td>
<td>Operations Research and Quality in Health Care</td>
<td>2</td>
<td>2</td>
<td>Instructor: Christianson, Jon B; prereq Grad-level statistics/management coursework; A-F only, 2 credit(s)</td>
</tr>
<tr>
<td>PUBH 6563</td>
<td>Integrated Delivery Systems</td>
<td>2</td>
<td>2</td>
<td>Instructor: Zismer, Daniel Kevin; prereq Health care admin student or instr consent; A-F only, 2 credit(s)</td>
</tr>
<tr>
<td>PUBH 6564</td>
<td>Private Purchasers of Health Care: Roles of Employers and Health Plans in U.S. Health Care System</td>
<td>2</td>
<td>2</td>
<td>Instructor: Christianson, Jon B; prereq MHA or MBA or HSRP or PHA student or instr consent; A-F only, 2 credit(s)</td>
</tr>
<tr>
<td>PUBH 6565</td>
<td>Health Care Delivery Design and Innovation</td>
<td>2</td>
<td>2</td>
<td>Instructor: Armbruster, Ryan Richard; prereq MPH or MHA certificate student or instr consent; A-F only, 2 credit(s)</td>
</tr>
<tr>
<td>PUBH 6568</td>
<td>Interprofessional Teamwork in Health Care</td>
<td>2</td>
<td>2</td>
<td>Instructor: Welch, Robert F; prereq [Public health MPH or MHA or certificate student] or [health services research, policy/admin] MS student or instr consent; A-F only, 2 credit(s)</td>
</tr>
<tr>
<td>PUBH 6569</td>
<td>Healthcare Policy</td>
<td>1</td>
<td>4</td>
<td>Instructor: Christianson, Jon B; prereq Public health MPH or MHA certificate student or instr consent; A-F only, 1 credit(s)</td>
</tr>
<tr>
<td>PUBH 6570</td>
<td>Topics: Health Care Administration</td>
<td>1-4</td>
<td>5</td>
<td>Instructor: Zismer, Daniel Kevin; prereq instr consent; A-F only, 1-4 credit(s), max credits 20, 5 completions allowed; A-F only, 1-4 credit(s), max credits 20, 5 completions allowed; A-F only, 1 credit(s)</td>
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<tr>
<td>PUBH 6571</td>
<td>Decision Analysis for Health Care</td>
<td>2</td>
<td></td>
<td>Instructor: Virnig, Beth A; In this course, we will examine the history, values, contexts, principles, frameworks, and organization of delivery systems that are a foundation for public health administration and practice. We will focus on the administrative processes and strategies that drive and support achieving results efficiently, effectively, and responsively. We will explore policy and programming challenges and opportunities in strategic public health issues. Grounded in theory and concepts, we will incorporate the core competencies and skills for public health professionals and focus on developing the problem solving and decision making skills through case studies and debates; A-F only, 2 credit(s)</td>
</tr>
</tbody>
</table>
Instructor: Kuntz,Karen M
Description: Influenza immunization rates among non-elderly individuals with high-risk medical conditions are below target levels in the United States. How can we optimize vaccine delivery for these individuals, particularly during periods of national influenza vaccine shortages? There is disagreement among physicians, administrators, and board members about how this year’s capital should be allocated to competing strategic initiatives. In which projects should the hospital system invest its capital? A bioterrorism attack would require rapid deployment of medical and pharmaceutical supplies to exposed individuals. What are the optimal strategies for pre-attack stockpiling and post-attack distribution and dispensing of supplies? Decisions in health care and public health at the individual, organizational, and policy levels involve tradeoffs among competing objectives, uncertainty about outcomes, incomplete information, and different attitudes among stakeholders towards risk and reward. In this course you will learn quantitative methods for structuring, analyzing and solving decision problems using decision trees and decision tree software, with a focus on the process of decision making aimed at providing insights into the situation. Upon completion of the course, you will be equipped to apply these methods to a range of practical problems you will face in your clinical, managerial or research career.
Style: 80% Lecture, 20% Discussion.
Grading: 30% mid exam, 50% final exam, 10% written homework, 10% class participation.
Exam Format: Take-home exams, problem solving.

PUBH 6724 The Health Care System and Public Health
3 credit(s); prereq Public health or grad student or instr consent
Instructor: Blewett,Lynn Ann
Description: Student may contact the instructor or department for information.

PUBH 6741 Ethics in Public Health: Professional Practice and Policy
3 credit(s); prereq Public health [MPH or MHA or certificate] student or environmental health [MS or PhD] major or instr consent
Instructor: Turner,Leigh
Description: Student may contact the instructor or department for information.

PUBH 6742 Ethics in Public Health: Research and Policy
3 credit(s); prereq Public health [MPH or MHA or certificate] student or [clinical research MS or Environmental health [MS or PhD] or epidemiology PhD or [health services research, policy/admin [MS or PhD]] major or instr consent
Instructor: Turner,Leigh
Description: Student may contact the instructor or department for information.

PUBH 6751 Principles of Management in Health Services Organizations
3 credit(s); prereq [Public hth MPH or MHA or certificate] student or [environmental health MS or PhD] student or dentistry MS student or instr consent
Instructor: Riley,William J
Description: Student may contact the instructor or department for information.

PUBH 6755 Planning and Budgeting for Public Health
3 credit(s); prereq Academic Hlth Ctr grad student or instr consent
Instructor: Barry JD,Anne M
Description: Student may contact the instructor or department for information.

PUBH 6765 Continuous Quality Improvement: Methods and Techniques
3 credit(s);
Instructor: Riley,William J
Description: Student may contact the instructor or department for information.

PUBH 6801 Health and Human Rights
2 credit(s); prereq Grad student or professional student or instr consent
Instructor: Allison,Kirk Charles
Description: Student may contact the instructor or department for information.

PUBH 6802 Managing Electronic Health Information
3 credit(s); prereq Familiarity with [Windows-based environment, Microsoft Word, Excel, Access, Web browser, graphical package, data collection/analysis projects, internet] or instr consent
Instructor: Wholey,Douglas R
Description: Managing health information is a central function of health care organizations. Information is used for managing population health, profiling providers, and measuring quality. This course describes the organizational context of health information. Sources and types of health information, organizational processes affecting information quality, consistency, completeness, and accuracy, methods for organizing information, and use of information will be discussed. Relational data theory will be used to describe the structure of information and Structured Query Language (SQL) will be used to create and query databases. Students will be introduced to the basic programming skills necessary to manage data in research projects. Programming aspects of the course will use SQL procedure in the SAS language. "...in an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes. What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it" Herbert A. Simon, 1971, "Designing Organizations for an Information-Rich World", in Martin Greenberger, Computers, Communication, and the Public Interest, Baltimore, Col, 70, MD: The Johns Hopkins Press, p. 187-202).

PUBH 6806 Principles of Public Health Research
2 credit(s); prereq Pub hth or grad or professional school student or instr consent
Instructor: Call PhD,Kathleen Thiede
Description: Student may contact the instructor or department for information.

PUBH 6811 Health Disparities Research: Measures, Methods, and Data
OPT No Aud, 2 credit(s); prereq [[Grad or professional student, introductory research methods course] or instr consent
Instructor: Call PhD,Kathleen Thiede
Description: Student may contact the instructor or department for information.

PUBH 6832 Economics of the Health Care System
3 credit(s); prereq [[Grad or professional school] student, 50% Lecture, 5% Film/Video, 25% Discussion, 20% Small Group Activities. Online section is 100% web based.
Grading: 40% mid exam, 45% final exam, 15% attendance.
Exam Format: take-home, open books.

PUBH 6741 Ethics in Public Health: Professional Practice and Policy
3 credit(s); prereq Public health [MPH or MHA or certificate] student or environmental health [MS or PhD] major or instr consent
Instructor: Turner,Leigh
Description: Student may contact the instructor or department for information.

PUBH 6742 Ethics in Public Health: Research and Policy
3 credit(s); prereq Public health [MPH or MHA or certificate] student or [clinical research MS or Environmental health [MS or PhD] or epidemiology PhD or [health services research, policy/admin [MS or PhD]] major or instr consent
Instructor: Turner,Leigh
Description: Student may contact the instructor or department for information.
knowledge of [microeconomic analytical tools, analytical statistics]] or instr consent ; Credit will not be granted if credit has been received for: ECON 5890;
Instructor: Nyman, John A
Description: This course is intended to give the student an understanding of and appreciation for the traditional issues in health economics. Historical, theoretical and empirical perspectives are applied to the various topics covered: the role of prices, the production of health, the demand for health care, the demand for health insurance, the health insurance market and managed care, the market for physicians’ services, production and cost of health care in hospitals and nursing homes, labor issues, pharmaceuticals, cost effectiveness analysis, equity and efficiency, role of government in the health economy, international comparisons, Medicaid and Medicare, and national health insurance and reform. The course relies on the use of conventional microeconomic analytical tools. Students should also have a basic knowledge of fundamental descriptive and analytical statistics. Students will not be expected to know calculus.

PUBH 6901 Foundations of Public Health Nutrition Leadership
2 credit(s); prereq Public health nutrition major or instr consent ;
Instructor: Stang, Jamie Sue
Description: This course provides an overview of the fundamental roles, responsibilities and competencies needed to succeed in the field of public health nutrition. It is designed for students in the public health nutrition MPH program. During this course, you will build skills in essential public health nutrition functions such as communications, cultural competence, professional self-assessment and public policy and advocacy. Further, this course will enable you to articulate a personal leadership style and philosophy related to public health nutrition practice.
Style: 55% Lecture, 10% Discussion, 30% Small Group Activities, 5% Student Presentation.
Grading: 55% special projects, 10% attendance, 15% reflection paper, 20% in-class presentation.

PUBH 6902 Maternal, Infant, and Preschool Nutrition
2 credit(s); prereq 3xxx nutrition course or equiv or instr consent ;
Instructor: Stang, Jamie Sue
Description: This 2-credit course provides an overview of nutrition issues affecting pregnant and postpartum women, females of reproductive age, infants and children through five years of age. The course integrates public health practice and policy recommendations with evidence-based clinical practice guidelines to provide a comprehensive view of maternal and infant nutrition issues seen by practitioners in community settings. Students will complete case studies or projects related to topics discussed in class and will participate in a group program planning and mock grant review activity.
Style: 80% Lecture, 10% Film/Video, 10% Small Group Activities.
Grading: 45% reports/papers, 45% special projects, 10% class participation.

PUBH 6903 Child and Adolescent Nutrition
2 credit(s); prereq Grad student or professional school student or instr consent ;
Instructor: Stang, Jamie Sue
Description: Student may contact the instructor or department for information.

PUBH 6905 Nutrition for Public Health Promotion and Disease Prevention
2 credit(s); prereq Grad student or instr consent ; Credit will not be granted if credit has been received for: PUBH 3905;
Instructor: Laska, Melissa Nelson
Description: This course covers nutrition topics of contemporary interest. Concepts/facts about science of human nutrition are discussed in relation to personal/community nutrition problems/concerns. This is an applied introductory course with labs.
Style: 25% Lecture, 15% Discussion, 40% Laboratory, 5% Student Presentation, 15% Guest Speakers. The course is structured as a weekly seminar with about an hour of lecture and an hour of lab work and small group activities. Discussion topics will be integrated throughout the course.
Grading: 22% mid exam, 23% final exam, 20% reports/papers, 15% special projects, 5% in-class presentation, 15% laboratory evaluation.

PUBH 6915 Nutrition Assessment
2 credit(s); prereq Public health nutrition major or instr consent ;
Instructor: Himes, John H
Description: Student may contact the instructor or department for information.

PUBH 7193 Directed Study: Environmental Health
OPT No Aud, 1-4 credit(s), max credits 20, 20 completions allowed; prereq instr consent ;
Instructor: Nachreiner, Nancy Martha
Description: Student may contact the instructor or department for information.

PUBH 7193 Directed Study: Environmental Health
OPT No Aud, 1-4 credit(s), max credits 20, 20 completions allowed; prereq instr consent ;
Instructor: Wattenberg, Elizabeth Vaughn
Description: Student may contact the instructor or department for information.

PUBH 7193 Directed Study: Environmental Health
OPT No Aud, 1-4 credit(s), max credits 20, 20 completions allowed; prereq instr consent ;
Instructor: Brosseau, Lisa M
Description: Student may contact the instructor or department for information.

PUBH 7193 Directed Study: Environmental Health
OPT No Aud, 1-4 credit(s), max credits 20, 20 completions allowed; prereq instr consent ;
Instructor: Raynor, Peter Cameron
Description: Student may contact the instructor or department for information.

PUBH 7194 Master's Project: Environmental Health
S-N only, 1-5 credit(s), max credits 25, 5 completions allowed; prereq Environmental health major, instr consent ;
Instructor: Gerberich, PhD, Susan G
Description: Student may contact the instructor or department for information.

PUBH 7194 Master's Project: Environmental Health
S-N only, 1-5 credit(s), max credits 25, 5 completions allowed; prereq Environmental health major, instr consent ;
Instructor: Brosseau, Lisa M
Description: Student may contact the instructor or department for information.

PUBH 7196 Field Experience: Environmental Health
S-N only, 1-5 credit(s), max credits 5, 5 completions allowed; prereq Environmental health major, instr consent ;
Instructor: Simcik, Matt  
Description: Student may contact the instructor or department for information.

PUBH 7196 Field Experience: Environmental Health  
S-N only, 1-5 credit(s), max credits 5, 5 completions allowed;  
prereq Environmental health major, instr consent;  
Instructor: Toscano Jr, William A  
Description: Student may contact the instructor or department for information.

PUBH 7280 Public Health Advocacy Through Professional Organizations  
S-N only, 0.5-2 credit(s), max credits 2; prereq Public health practice MPH major or instr consent;  
Instructor: Hart MD, James F  
Description: Student may contact the instructor or department for information.

PUBH 7291 Independent Study: Public Health Practice  
S-N only, 0.5-4 credit(s), max credits 20, 20 completions allowed; prereq Public health practice MPH major, instr consent;  
Instructor: Hart MD, James F  
Description: Student may contact the instructor or department for information.

PUBH 7294 Master’s Project: Public Health Practice  
S-N only, 0.5-4 credit(s), max credits 12, 3 completions allowed; prereq Public health practice MPH major, instr consent;  
Instructor: Varkey, Prathibha  
Description: Student may contact the instructor or department for information.

PUBH 7296 Field Experience: Public Health Practice  
S-N only, 0.5-6 credit(s), max credits 24, 4 completions allowed; prereq Public health practice MPH major, instr consent;  
Credit will not be granted if credit has been received for: CVM 6516;  
Instructor: Hedberg, Craig W  
Description: Student may contact the instructor or department for information.

PUBH 7296 Field Experience: Public Health Practice  
S-N only, 0.5-6 credit(s), max credits 24, 4 completions allowed; prereq Public health practice MPH major, instr consent;  
Credit will not be granted if credit has been received for: CVM 6516;  
Instructor: Riley, William J  
Description: Student may contact the instructor or department for information.

PUBH 7296 Field Experience: Public Health Practice  
S-N only, 0.5-6 credit(s), max credits 24, 4 completions allowed; prereq Public health practice MPH major, instr consent;  
Credit will not be granted if credit has been received for: CVM 6516;  
Instructor: Sreevatsan, Srinand  
Description: Student may contact the instructor or department for information.

PUBH 7296 Field Experience: Public Health Practice  
S-N only, 0.5-6 credit(s), max credits 24, 4 completions allowed; prereq Public health practice MPH major, instr consent;  
Credit will not be granted if credit has been received for: CVM 6516;  
Instructor: Schmidt, Peggy Lynn  
Description: Student may contact the instructor or department for information.

PUBH 7296 Field Experience: Public Health Practice  
S-N only, 0.5-6 credit(s), max credits 24, 4 completions allowed; prereq Public health practice MPH major, instr consent;  
Credit will not be granted if credit has been received for: CVM 6516;  
Instructor: Hueston DVM, William D.  
Description: Student may contact the instructor or department for information.

PUBH 7296 Field Experience: Public Health Practice  
S-N only, 0.5-6 credit(s), max credits 24, 4 completions allowed; prereq Public health practice MPH major, instr consent;  
Credit will not be granted if credit has been received for: CVM 6516;  
Instructor: Berthold, Peter  
Description: Student may contact the instructor or department for information.

PUBH 7401 Fundamentals of Biostatistical Inference  
4 credit(s); prereq Background in calculus; intended for PhD students in public hlth and other hlth sci who need rigorous approach to probability/statistics and statistical inference with applications to research in public hlth;  
Instructor: Maclehose, Richard F  
Description: Student may contact the instructor or department for information.

PUBH 7405 Biostatistics: Regression  
4 credit(s); prereq [[Stat 5101 or Concurrent registration is required (or allowed) in Stat 5101], biostatistics major] or instr consent;  
Instructor: Le, Chap T.
Description: Student may contact the instructor or department for information.

PUBH 7430 Statistical Methods for Correlated Data
3 credit(s); prereq [{6420 or equiv}, {6451 or 6406 or Stat 5303 or equiv}], familiarity with matrix notation or instr consent ;
Instructor: Wolfson, Julian
Description: Student may contact the instructor or department for information.

PUBH 7445 Statistics for Human Genetics and Molecular Biology
3 credit(s); prereq {6450, [6451 or equiv]} or instr consent ; background in molecular biology recommended;
Instructor: Reilly, Canvan Sheerin
Description: Student may contact the instructor or department for information.

PUBH 7450 Survival Analysis
3 credit(s); prereq 7406, 7407, [STAT 5102 or STAT 8102];
Instructor: Pan, Wei
Description: Student may contact the instructor or department for information.

PUBH 7460 Advanced Statistical Computing
3 credit(s); prereq [7405, biostatistics major, [C or FORTRAN]] or instr consent ;
Instructor: Connett, John E
Description: Student may contact the instructor or department for information.

PUBH 7494 Master's Project: Biostatistics
S-N only, 1-3 credit(s), max credits 3, 1 completion allowed;
prereq Biostatistics major, instr consent Biostatistics major, instr consent Biostatistics major, instr consent ;
Instructor: Thomas, William
Description: Student may contact the instructor or department for information.

PUBH 7494 Master's Project: Biostatistics
S-N only, 1-3 credit(s), max credits 3, 1 completion allowed;
prereq Biostatistics major, instr consent Biostatistics major, instr consent Biostatistics major, instr consent ;
Instructor: Hodges, James Steven
Description: Student may contact the instructor or department for information.

PUBH 7494 Master's Project: Biostatistics
S-N only, 1-3 credit(s), max credits 3, 1 completion allowed;
prereq Biostatistics major, instr consent Biostatistics major, instr consent Biostatistics major, instr consent ;
Instructor: Hanson, Timothy Edward
Description: Student may contact the instructor or department for information.

PUBH 7494 Master's Project: Biostatistics
S-N only, 1-3 credit(s), max credits 3, 1 completion allowed;
prereq Biostatistics major, instr consent Biostatistics major, instr consent Biostatistics major, instr consent ;
Instructor: Luo, Xianghua
Description: Student may contact the instructor or department for information.

PUBH 7496 Biostatistics: Field Experience
S-N only, 2-6 credit(s), max credits 6, 1 completion allowed;
prereq Biostatistics MPH student;
Instructor: Rudser, Kyle
Description: Student may contact the instructor or department for information.

PUBH 7580 Organizational Management in Long Term Care
2-4 credit(s), max credits 4, 1 completion allowed;
Instructor: Grant, Leslie Alan
Description: Student may contact the instructor or department for information.

PUBH 7582 Practicum in Long-Term Care Administration
S-N only, 4 credit(s); prereq [7580, 7581, 7583] or [7587, 7588];
Instructor: Grant, Leslie Alan
Description: Student may contact the instructor or department for information.

PUBH 7584 Health Care and Medical Needs
A-F only, 2 credit(s);
Instructor: Grant, Leslie Alan
Description: Student may contact the instructor or department for information.

PUBH 7588 Information Uses in Long-Term Care
A-F only, 2 credit(s); prereq Some knowledge of computers;
Instructor: Potthoff, Sandra Jean
Description: Student may contact the instructor or department for information.

PUBH 7591 Independent Study: Health Care Administration
1-4 credit(s), max credits 20, 20 completions allowed; prereq instr consent ;
Instructor: Grant, Leslie Alan
Description: Student may contact the instructor or department for information.

PUBH 7784 Master's Project Seminar: Public Health Administration and Policy
A-F only, 1 credit(s), max credits 2; prereq Public health administration/policy major;
Instructor: McAlpine, Donna D
Description: Student may contact the instructor or department for information.

PUBH 7894 MS in Health Services Research, Policy, and Administration Plan B Project
S-N only, 1-2 credit(s), max credits 4; prereq [Health Services Research, Policy/Administration] MS student;
Instructor: Call PhD, Kathleen Thiede
Description: Student may contact the instructor or department for information.

PUBH 7894 MS in Health Services Research, Policy, and Administration Plan B Project
S-N only, 1-2 credit(s), max credits 4; prereq [Health Services Research, Policy/Administration] MS student;
Instructor: Nyman, John A.
Description: Student may contact the instructor or department for information.

PUBH 7894 MS in Health Services Research, Policy, and Administration Plan B Project
S-N only, 1-2 credit(s), max credits 4; prereq [Health Services Research, Policy/Administration] MS student;
Instructor: Wholey, Douglas R
Description: Student may contact the instructor or department for information.

PUBH 7894 MS in Health Services Research, Policy, and Administration Plan B Project
S-N only, 1-2 credit(s), max credits 4; prereq [Health Services Research, Policy/Administration] MS student;
Instructor: McAlpine, Donna D
Description: Student may contact the instructor or department for information.

PUBH 7894 MS in Health Services Research, Policy, and Administration Plan B Project
S-N only, 1-2 credit(s), max credits 4; prereq [Health Services Research, Policy/Administration] MS student;
Instructor: Town, Robert James
Description: Student may contact the instructor or department for information.
PUBH 7894 MS in Health Services Research, Policy, and Administration Plan B Project
S-N only, 1-2 credit(s), max credits 4; prerequisite [Health Services Research, Policy/Administration] MS student;
Instructor: Kuntz,Karen M
Description: Student may contact the instructor or department for information.

PUBH 8120 Occupational Health and Safety Research Seminar
S-N only, 1 credit(s), max credits 12, 12 completions allowed; prerequisite [6120, [6330 or 6341], 6450, environmental health major, (OIP RTP specialty or equiv)] or instr consent;
Instructor: Gerberich PhD,Susan G
Description: Student may contact the instructor or department for information.

PUBH 8140 Validity Concepts in Epidemiologic Research
S-N only, 2 credit(s);
Instructor: Maldonado,George
Description: Student may contact the instructor or department for information.

PUBH 8160 Advanced Toxicology
2 credit(s); prerequisite [6140, one course in biochem, one course in molecular bio] or instr consent;
Instructor: Peterson,Lisa Ann
Description: Student may contact the instructor or department for information.

PUBH 8161 Current Literature in Toxicology
S-N only, 1 credit(s), max credits 3, 3 completions allowed; prerequisite 6104;
Instructor: Wattenberg,Elizabeth Vaughn
Description: Style: 50% Discussion, 50% Student Presentation.
Grading: 50% in-class presentation, 50% class participation.

PUBH 8163 Toxicology
A-F only, 5 credit(s); prerequisite Enrolled in toxicology concentration of environmental health PhD program;
Instructor: Wattenberg,Elizabeth Vaughn
Description: Student may contact the instructor or department for information.

PUBH 8165 Current Topics in Toxicology
S-N only, 1 credit(s), max credits 2; prerequisite [Environmental health PhD, toxicity concentration] student or instr consent;
Instructor: Toscano Jr,William A
Description: Student may contact the instructor or department for information.

PUBH 8166 Experiences in Toxicology Research
A-F only, 3 credit(s); prerequisite Environmental health PhD student in toxicology concentration;
Instructor: Peterson,Lisa Ann
Description: Student may contact the instructor or department for information.

PUBH 8194 Directed Research: Environmental Health
1-6 credit(s), max credits 6, 1 completion allowed; prerequisite instr consent;
Instructor: Ramachandran,Gurumurthy
Description: Student may contact the instructor or department for information.

PUBH 8341 Advanced Epidemiologic Methods: Concepts
3 credit(s); prerequisite [6341, 6342] or equiv;
Instructor: Oakes,Michael
Description: Student may contact the instructor or department for information.

PUBH 8401 Linear Models
4 credit(s); prerequisite [7405, Concurrent registration is required (or allowed) in STAT 8101] or instr consent, calculi,
familiar with matrix/linear algebra;
Instructor: Wu,Baolin
Description: Student may contact the instructor or department for information.

PUBH 8432 Probability Models for Biostatistics
3 credit(s); prerequisite [7450, 7407, Stat 5102, [advanced biostatistics or statistics] major] or instr consent;
Instructor: Basu,Sanoli
Description: Student may contact the instructor or department for information.

PUBH 8445 Statistics for Human Genetics and Molecular Biology
3 credit(s); prerequisite [[Stat 8101, Stat 8102] or equiv], PhD student or instr consent; some background with molecular biology desirable;
Instructor: Reilly,Cavan Sheerin
Description: Student may contact the instructor or department for information.

PUBH 8482 Sequential Analysis
3 credit(s); prerequisite [7450, 8432, Stat 5102, [advanced biostatistics or statistics] major] or instr consent;
Instructor: Grambsch,Patricia L
Description: Student may contact the instructor or department for information.

PUBH 8494 Directed Research: Biostatistics
S-N only, 1-4 credit(s), max credits 4, 4 completions allowed; prerequisite instr consent;
Instructor: Carlin PhD, Bradley Paige
Description: Student may contact the instructor or department for information.

PUBH 8494 Directed Research: Biostatistics
S-N only, 1-4 credit(s), max credits 4, 4 completions allowed; prerequisite instr consent;
Instructor: Telke,Susan Elizabe
Description: Student may contact the instructor or department for information.

PUBH 8801 Health Services Policy Analysis: Theory
3 credit(s); prerequisite [Grad or professional school] student or instr consent;
Instructor: Moscovice,Ira S
Description: Student may contact the instructor or department for information.

PUBH 8810 Research Studies in Health Care
3 credit(s), max credits 6; prerequisite [Grad or professional school] student or instr consent;
Instructor: Rockwood,Todd H
Description: Student may contact the instructor or department for information.

PUBH 8811 Research Methods in Health Care
3 credit(s); prerequisite [8810, [Grad or professional school] student] or instr consent;
Instructor: Dowd,Bryan E
Description: Student may contact the instructor or department for information.

PUBH 8831 Writing for Research
OPT No Aud, 2 credit(s); prerequisite 8830;
Instructor: Town,Robert James
Description: Student may contact the instructor or department for information.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit(s)</th>
<th>Instructor</th>
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<td>RAD 120</td>
<td>X-Ray Conference</td>
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<td>Dietz, Jr. Charles</td>
<td>Student may contact the instructor or department for information.</td>
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<td>The lecture is a review of the history of the development of x-rays.</td>
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<td>PUBH 8893</td>
<td>Directed Study: Health Services Research, Policy,</td>
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**Radiology**

2-300 Fairview University Medical Center (Box 292)

**Recreation Resource Management**

115 Green Hall

**RRM 1001 Orientation and Information Systems**

A-F only, 1 credit(s); Instructor: Burk, Thomas Edward

Description: This course provides orientation and planning for students entering the Forest Resources (FR) and Recreation Resources Management (RRM) majors. During this semester students will be introduced to key issues in their fields of study. This course provides orientation and planning for students entering the Forest Resources (FR) and Recreation Resources Management (RRM) majors. During this semester students will be introduced to key issues in their fields of study. This course provides orientation and planning for students entering the Forest Resources (FR) and Recreation Resources Management (RRM) majors. During this semester students will be introduced to key issues in their fields of study. Description of careers, career planning (choice of major tracks, internships, summer experience, mentoring), academic advising and engagement with alumni contacts are major components of the course. Introduction to professional skill building includes information technology tools in the workplace and access to library and research tools. At the end of this course students should know the kind of course work needed for their degree choice as well as the timing of when to take courses to successfully complete their undergraduate degree program. Students should know what the student learning centers (SLC) and SMART commons are and how to use them. In addition students should be able to: a) write a cover letter and develop a resume targeting a specific job of interest to them, b) know how to conduct a job search and prepare for a job interview, c) find an internship of interest using resources at the St. Paul Campus Career Center, d) find and apply for study abroad opportunities, e) understand how to use the campus libraries to access information, f) have an appreciation for and obtain some exposure to the importance of geospatial data to their field of study, g) manipulate data in an EXCEL spreadsheet, and h) assess their desire to continue their education beyond the baccalaureate level.

**RRM 3101 Park and Protected Area Tourism**

A-F only, 3 credit(s); Credit will not be granted if credit has been received for: RRM 5101;
Instructor: Schneider, Ingrid Eleanore  
Description: This course is designed to familiarize you with the basic concept of resource-based tourism and then develop the expertise to plan and evaluate sustainable tourism operations. Specifically, the objectives of this course are to: 1. Provide an understanding of the concept and evolution of resource-based tourism, including agricultural & cultural. 2. Develop an understanding of and appreciation for the complexities involved with "sustainable tourism." 3. Identify specific social, economic and environmental impacts associated with resource-based tourism and methods to monitor them. 4. Illustrate domestic and international case studies of resource-based tourism. 5. Enable critical evaluation of resource-based tourism services and the ability to plan for them.  
Style: 30% Lecture, 30% Discussion. in-class assignments, field trips, guest lectures  
Grading: 35% reports/papers, 40% quizzes, 5% in-class presentation, 20% class participation.

RRM 3480 Topics in Recreation Resource Management  
1-4 credit(s), max credits 6, 6 completions allowed  
Instructor: Gustafson, Kent E  
Description: A 6 day, 40 hour short course related to the basic principles of festival and event management. The Class will include lecture, small and large group discussion, as well as a "behind-the-scenes" visit to an area event. Topics covered include: event planning as a career; logistics and site planning, risk management, financial management, marketing, sponsorship, and event evaluation. Participants must have full day availability as class sessions run from 9:00am to 4 pm., Thursday-Saturday, September 23-25 and September 30-October 2. Certificate available upon completion of class requirements and submission of an event analysis paper.

RRM 4293 Directed Study  
1-5 credit(s), max credits 12, 12 completions allowed; prereq instr consent  
Instructor: Schneider, Ingrid Eleanore  
Description: Students select/conduct a study of or project on a topic of personal interest in consultation with faculty member. Documented by initial proposal and reports of accomplishment.

RRM 4293 Directed Study  
1-5 credit(s), max credits 12, 12 completions allowed; prereq instr consent  
Instructor: Messer, Cynthia Cosdon  
Description: Students select/conduct a study of or project on a topic of personal interest in consultation with faculty member. Documented by initial proposal and reports of accomplishment.

RRM 4293 Directed Study  
1-5 credit(s), max credits 12, 12 completions allowed; prereq instr consent  
Instructor: Davenport, Mae Allen  
Description: Students select/conduct a study of or project on a topic of personal interest in consultation with faculty member. Documented by initial proposal and reports of accomplishment.

RRM 5101 Park and Protected Area Tourism  
A-F only, 3 credit(s); prereq Grad student or instr consent  
Credit will not be granted if credit has been received for: RRM 3101  
Instructor: Schneider, Ingrid Eleanore  
Description: This course is designed to familiarize you with the basic concept of resource-based tourism and then develop the expertise to plan and evaluate sustainable tourism operations. Specifically, the objectives of this course are to: 1. Provide an understanding of the concept and evolution of resource-based tourism, including agricultural & cultural. 2. Develop an understanding of and appreciation for the complexities involved with "sustainable tourism." 3. Identify specific social, economic and environmental impacts associated with resource-based tourism and methods to monitor them. 4. Illustrate domestic and international case studies of resource-based tourism. 5. Enable critical evaluation of resource-based tourism services and the ability to plan for them.

Recreation, Park, and Leisure Studies  
220 Cooke Hall

REC 1501 Orientation to Leisure and Recreation  
3 credit(s);  
Instructor: Magnuson, Connie  
Description: Introduction to the field of recreation and leisure studies through several field trips and service learning opportunities that highlight a variety of recreation programs, facilities, services and delivery systems. This interactive, experiential approach allows students to see first hand the opportunities and careers in the recreation industry. Most classes will be spent out of the class and in the field meeting professionals in the industry and exploring various agencies (recreation centers, athletic facilities, camps, outdoor based programs, nature centers, campus recreation, national parks, regional parks,...). Discover the many career paths available and the relevancy of this field in the quality of life of our society!

REC 3281 Research and Evaluation in Recreation, Park, and Leisure Studies  
A-F only, 4 credit(s);  
Instructor: Brown, Tony Kevin  
Description: Basic techniques; emphasis on social research and evaluation methodology; survey of present status of recreation and park research and evaluation.

REC 3541W Recreation Programming  
A-F only, 3 credit(s); Meets CLE req of Writing Intensive;  
Instructor: Miller, Susie  
Description: The emphasis of this course is on the program planning process from creating the idea through the evaluation. Various formats such as leisure learning, field trips and special event participation are highlighted as well as developing the skills needed to produce professional programs for diverse populations. This is a hands-on class and skills acquired and project development learned can be used in a wide variety of recreation settings.

REC 3796 Senior Internship in Recreation, Park, and Leisure Studies  
S-N only, 9 credit(s); prereq Rec major, completion of most core courses, sr, instr consent;  
Instructor: Magnuson, Connie  
Description: Supervised field experience for pre-professional students in selected agencies.

REC 3993 Directed Study in Recreation, Park, and Leisure Studies  
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed; prereq Rec major, instr consent;  
Instructor: Magnuson, Connie  
Description: Explore areas of personal interest and delve into a degree-related topic that may not be covered in depth in the coursework that will be applicable to your chosen career path. During this independent study, you will work with faculty or recreational professionals on creative activities, scholarly research, or other project developments that allow for learning opportunities and contribute to the student's academic program. A great opportunity for getting involved in the field and working with mentors and experts in the field that will provide tremendous learning and networking opportunities.

REC 3993 Directed Study in Recreation, Park, and Leisure Studies  
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed; prereq Rec major, instr consent;  
Instructor: Kane, Mary Jo  
Description: Scholarly projects (e.g., library or field research) or demonstration projects.
REC 3993 Directed Study in Recreation, Park, and Leisure Studies  
A-F only, 1-9 credit(s); max credits 9, 9 completions allowed; prerq Rec major, instr consent;  
Instructor: Ross, Stephen D  
Description: Scholarly projects (e.g., library or field research) or demonstration projects.

REC 3993 Directed Study in Recreation, Park, and Leisure Studies  
A-F only, 1-9 credit(s); max credits 9, 9 completions allowed; prerq Rec major, instr consent;  
Instructor: Kihl, Lisa A  
Description: Scholarly projects (e.g., library or field research) or demonstration projects.

REC 5111 Sports Facilities  
A-F only, 3 credit(s); prerq Kin or Rec major or instr consent;  
Instructor: Turman, PhD, James C  
Description: An overview of sports facilities including the planning, development, design, funding, financing, and construction of such facilities with emphasis on major indoor multipurpose facilities for recreational sports, physical education, and intercollegiate athletics on the college campus and an introduction to public/private arenas and stadiums. The class will tour selected on-campus kinesiology, athletic, and recreational facilities. Students will be assigned a group sports facilities project and present their concepts and plans to the class. Other topic areas may include, operations management, marketing, advertising, public relations, and risk management.  
Style: 35% Lecture, 20% Discussion, 15% Small Group Activities, 10% Student Presentation, 15% Field Trips, 5% Guest Speakers.  
Grading: 17% final exam, 35% reports/papers, 25% special projects, 5% quizzes, 13% written homework, 5% attendance. Note: attendance also includes in-class presentation and participation.  
Exam Format: multiple choice, fill-in, matching, and essay

REC 5271 Community Leisure Services for Persons with Disabilities  
A-F only, 3 credit(s);  
Instructor: Magnuson, Connie  
Description: This course explores services that have historically been provided for persons with disabilities and how that has drastically changed over the past few decades. We will evaluate how individuals with disabilities are portrayed in popular film and how that influences our perceptions and expectations. We will look at "people first" language, etiquette, and how to interact with a person with a disability. This is done first in the class room and then with a hands-on learning experience in the community. It is designed to be an informative course that will challenge your perceptions and give you a better understanding of working with people of all abilities.

REC 5421 Sport Finance  
A-F only, 3 credit(s); prerq Grad student or instr consent;  
Instructor: Ross, Stephen D  
Description: In recent years, traditional sources of revenue ? tax support, media revenues and gate receipts ? have declined while costs have escalated. Increased demand for state-of-the-art facilities, coupled with an increase in player and operational costs, have forced sport managers to do more with less. This course is designed to provide students with an introduction to financial analysis, including discussion of traditional and innovative revenue producing strategies available to sport organizations. Along with more conventional income sources such as tax support, municipal and corporate bonds, ticket sales, concessions and fund raising, students will receive in-depth exposure to more recent innovations.

REC 5461 Foundations of Sport Management  
A-F only, 3 credit(s); prereq Kin or rec or postbac or grad student or instr consent;  
Instructor: Esten, Phil L  
Description: Theories/techniques in administration/management of sport enterprises. Organizational theory/policy, practical examples of sport management skills/strategies.

REC 5511 Women in Sport and Leisure  
A-F only, 3 credit(s); Credit will not be granted if credit has been received for: KIN 5511;  
Instructor: Buysee, Jo Ann  
Description: The primary purpose of this course is to provide students with an opportunity to critically examine, understand and appreciate women's involvement in-and contributions to-sport and physical activity from both an historical and contemporary perspective. Students will be expected to analyze, critique, and evaluate a wide range of historical, cultural, economic and socio-psychological issues that have shaped the nature and scope of women's participation in sport, physical activity and leisure. Utilizing feminist perspectives, particular attention will be given to the various ways in which females (and their bodies) are often viewed as fundamentally different-physically, socially and psychologically-from their male counterparts. Much of this analysis will take place against the backdrop of highly organized, competitive sports such as intercollegiate athletics. In addition, we will see how it is impossible to separate women's and men's sports from the broader societal roles of women and men in general. Finally, issues that address race/ethnicity, social class and sexual orientation, and how those issues influence women's and men's sports, will also be emphasized throughout the semester. This course will be web enhanced through webctvista.  
Style: 50% Lecture, 40% Discussion.  
Grading: 25% mid exam, 45% reports/papers, 10% in-class presentation, 20% class participation.  
Exam Format: essay

REC 5631 Programming and Promotion in Sport  
A-F only, 3 credit(s); prereq Kin or Rec grad student or instr consent;  
Instructor: Ross, Stephen D  
Description: While sport promoters can be traced as far back as early 20th century boxing matches, sport marketing as a concept has just recently been credited with the sudden rise in industrial interest. Although the sport industry is still in it's early growth period, it has experienced extreme financial prosperity. Largely responsible for the increased popularity and revenue gain of the field is sport marketing. This course is designed to introduce marketing concepts as they apply to the sport industry. Topics such as consumer behavior, market research, the marketing mix and licensing will be covered through the use of interactive discussion and practical application.

REC 5801 Legal Aspects of Sport and Recreation  
A-F only, 4 credit(s); prereq 3551 or 5461 or instr consent;  
Instructor: Loher JD, Vickie Lynn  
Description: Legal issues related to recreation, park, and sport programs/facilities with public/private sectors.

REC 5981 Research Methodology in Kinesiology, Recreation, and Sport  
A-F only, 3 credit(s); prereq MEd or grad student or instr consent; Credit will not be granted if credit has been received for: KIN 5981;  
Instructor: Kihl, Lisa A  
Description: Defines/reviews various types of research in exercise and sport science, physical education, and recreation studies. Qualitative research, field studies, and introspective paradigm. Students will be expected to analyze, critique, and evaluate a wide range of historical, cultural, economic and socio-psychological issues that have shaped the nature and scope of women's participation in sport, physical activity and leisure. Utilizing feminist perspectives, particular attention will be given to the various ways in which females (and their bodies) are often viewed as fundamentally different-physically, socially and psychologically-from their male counterparts. Much of this analysis will take place against the backdrop of highly organized, competitive sports such as intercollegiate athletics. In addition, we will see how it is impossible to separate women's and men's sports from the broader societal roles of women and men in general. Finally, issues that address race/ethnicity, social class and sexual orientation, and how those issues influence women's and men's sports, will also be emphasized throughout the semester. This course will be web enhanced through webctvista.  
Style: 50% Lecture, 40% Discussion.  
Grading: 25% mid exam, 45% reports/papers, 10% in-class presentation, 20% class participation.  
Exam Format: essay

REC 5981 Research Methodology in Kinesiology, Recreation, and Sport  
A-F only, 3 credit(s); prereq MEd or grad student or instr consent; Credit will not be granted if credit has been received for: KIN 5981;  
Instructor: Kihl, Lisa A  
Description: Defines/reviews various types of research in exercise and sport science, physical education, and recreation studies. Qualitative research, field studies, and introspective research strategies as alternatives to traditional scientific paradigm.

REC 5992 Readings: Recreation  
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed; prereq REC major, instr consent REC major, instr consent;  
Instructor: Magnuson, Connie  
Description: Independent study under tutorial guidance by faculty member on particular topic(s) not covered in regular coursework.
University of Minnesota - Course Guide for Twin Cities Campus  Fall 2011

REC 5992 Readings: Recreation
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed; prereq REC major, instr consent REC major, instr consent ;
Description: Independent study under tutorial guidance by faculty member on particular topic(s) not covered in regular coursework.
Instructor: Kihl,Lisa A

REC 5992 Readings: Recreation
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed; prereq REC major, instr consent REC major, instr consent ;
Description: Independent study under tutorial guidance by faculty member on particular topic(s) not covered in regular coursework.
Instructor: Brownlee,Eric A

REC 5995 Problems in Recreation, Park, and Leisure Studies
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed; prereq [REC MEd or grad student], instr consent ;
Description: Independent study of leisure service programs, systems, facilities, or policies. Focuses on conduct of recreation programs. Scholarly projects (e.g., library or field research) or demonstration projects.
Instructor: Kane,Mary Jo

REC 5995 Problems in Recreation, Park, and Leisure Studies
A-F only, 1-9 credit(s), max credits 9, 9 completions allowed; prereq [REC MEd or grad student], instr consent ;
Description: Independent study of leisure service programs, systems, facilities, or policies. Focuses on conduct of recreation programs. Scholarly projects (e.g., library or field research) or demonstration projects.
Instructor: Magnuson,Connie

REC 6796 Practicum in Recreation, Park, and Leisure Studies
S-N only, 3-9 credit(s), max credits 9, 3 completions allowed; prereq [Rec MEd or grad student], instr consent ;
Description: Practical experiences in recreation under supervision of University faculty member and agency supervisor.
Instructor: Buysse,Jo Ann

REC 6796 Practicum in Recreation, Park, and Leisure Studies
S-N only, 3-9 credit(s), max credits 9, 3 completions allowed; prereq [Rec MEd or grad student], instr consent ;
Description: Supervised experiences in program operation, management, administration, and supervisory duties in therapeutic recreation, leisure services, or sport management.
Instructor: Allison JD,Rayla

REC 6796 Practicum in Recreation, Park, and Leisure Studies
S-N only, 3-9 credit(s), max credits 9, 3 completions allowed; prereq [Rec MEd or grad student], instr consent ;
Description: Supervised experiences in program operation, management, administration, and supervisory duties in therapeutic recreation, leisure services, or sport management.
Instructor: Kane,Mary Jo

REC 6796 Practicum in Recreation, Park, and Leisure Studies
S-N only, 3-9 credit(s), max credits 9, 3 completions allowed; prereq [Rec MEd or grad student], instr consent ;
Description: Supervised experiences in program operation, management, administration, and supervisory duties in therapeutic recreation, leisure services, or sport management.
Instructor: Allison JD,Rayla

REC 6796 Practicum in Recreation, Park, and Leisure Studies
S-N only, 3-9 credit(s), max credits 9, 3 completions allowed; prereq [Rec MEd or grad student], instr consent ;
Description: Supervised experiences in program operation, management, administration, and supervisory duties in therapeutic recreation, leisure services, or sport management.
Instructor: Kane,Mary Jo

REC 6796 Practicum in Recreation, Park, and Leisure Studies
S-N only, 3-9 credit(s), max credits 9, 3 completions allowed; prereq [Rec MEd or grad student], instr consent ;
Description: Supervised experiences in program operation, management, administration, and supervisory duties in therapeutic recreation, leisure services, or sport management.
Instructor: Brownlee,Eric A

REC 6796 Practicum in Recreation, Park, and Leisure Studies
S-N only, 3-9 credit(s), max credits 9, 3 completions allowed; prereq [Rec MEd or grad student], instr consent ;
Description: Prereq [Rec MEd or grad student], instr consent ;
Instruction: Brownlee,Eric A

REC 6796 Practicum in Recreation, Park, and Leisure Studies
S-N only, 1-4 credit(s), max credits 9, 3 completions allowed; prereq instr consent REC PhD student, instr consent ;
Description: Individual scholarly research.
Instructor: Kane,Mary Jo

REC 6796 Practicum in Recreation, Park, and Leisure Studies
S-N only, 1-4 credit(s), max credits 9, 3 completions allowed; prereq instr consent REC PhD student, instr consent ;
Description: Individual scholarly research.
Instructor: Brownlee,Eric A

REC 6796 Practicum in Recreation, Park, and Leisure Studies
S-N only, 1-4 credit(s), max credits 9, 3 completions allowed; prereq instr consent REC PhD student, instr consent ;
Description: Individual scholarly research.
Instructor: Kihl,Lisa A

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RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program approval;
Instructor: Patterson, Robert Patrick
Description: Student may contact the instructor or department for information.

RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program approval;
Instructor: Carey, James Robert
Description: Student may contact the instructor or department for information.

RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program approval;
Instructor: Schaber, PhD, Patricia Louise
Description: Student may contact the instructor or department for information.

RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program approval;
Instructor: Anderson, Kathleen
Description: Student may contact the instructor or department for information.

RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program approval;
Instructor: Mathiowetz, PhD, Virgil G
Description: Student may contact the instructor or department for information.

RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program approval;
Instructor: Snow, MD, PhD, LeAnn M
Description: Student may contact the instructor or department for information.

RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program approval;
Instructor: Di Fabio, Richard P
Description: Student may contact the instructor or department for information.

RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program approval;
Instructor: Stern, PhD, Erica Beth
Description: Student may contact the instructor or department for information.

RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program approval;
Instructor: Ludewig, Paula M
Description: Student may contact the instructor or department for information.

RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program approval;
Instructor: Lowe, Dawn Annette
Description: Student may contact the instructor or department for information.

RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program approval;
Instructor: Kukulka, Carl G
Description: Student may contact the instructor or department for information.

RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program approval;
Instructor: Nuckley, PhD, David J
Description: Student may contact the instructor or department for information.

RSC 5294 Independent Study in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program permission;
Instructor: Thompson, PhD, LaDora V
Description: Student may contact the instructor or department for information.

RSC 8170 Special Topics in Rehabilitation Science
A-F only, 1 credit(s); prereq [Rehabilitation science student or program permission], instr consent, [rehabilitation science student or program permission];
Instructor: Ludewig, Paula M
Description: Student may contact the instructor or department for information.

RSC 8170 Special Topics in Rehabilitation Science
A-F only, 1 credit(s), max credits 3, 3 completions allowed; prereq Rehabilitation science student or program permission], instr consent;
Instructor: Carei, James Robert
Description: Student may contact the instructor or department for information.

RSC 8170 Special Topics in Rehabilitation Science
A-F only, 1 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Lowe, Dawn Annette
Description: Student may contact the instructor or department for information.

RSC 8170 Special Topics in Rehabilitation Science
A-F only, 1 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Carey, James Robert
Description: Student may contact the instructor or department for information.

RSC 8170 Special Topics in Rehabilitation Science
A-F only, 1 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Thompson, PhD, LaDora V
Description: Student may contact the instructor or department for information.

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RSC 8170 Special Topics in Rehabilitation Science
A-F only, 1 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Schaber PhD, Patricia Louise
Description: Student may contact the instructor or department for information.

RSC 8170 Special Topics in Rehabilitation Science
A-F only, 1 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Mathiowetz PhD, Virgil G
Description: Student may contact the instructor or department for information.

RSC 8170 Special Topics in Rehabilitation Science
A-F only, 1 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Anderson, Kathleen
Description: Student may contact the instructor or department for information.

RSC 8170 Special Topics in Rehabilitation Science
A-F only, 1 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Thompson PhD, LaDora V.
Description: Student may contact the instructor or department for information.

RSC 8170 Special Topics in Rehabilitation Science
A-F only, 1 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Ludewig, Paula M
Description: Student may contact the instructor or department

RSC 8185 Problems in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Lowe, Dawn Annette
Description: Student may contact the instructor or department for information.

RSC 8185 Problems in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Nuckley PhD, David J
Description: Student may contact the instructor or department for information.

RSC 8185 Problems in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Carey, James Robert
Description: Student may contact the instructor or department for information.

RSC 8185 Problems in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Mathiowetz PhD, Virgil G
Description: Student may contact the instructor or department for information.

RSC 8185 Problems in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Anderson, Kathleen
Description: Student may contact the instructor or department for information.

RSC 8185 Problems in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Snow MD, PhD, LeAnn M
Description: Student may contact the instructor or department for information.

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Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class
Schedule.
RSC 8185 Problems in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Stern PhD, Erica Beth
Description: Student may contact the instructor or department for information.

RSC 8185 Problems in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Thompson PhD, LaDora V
Description: Student may contact the instructor or department for information.

RSC 8185 Problems in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Ludewig, Paula M
Description: Student may contact the instructor or department for information.

RSC 8185 Problems in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Kukulka, Carl G
Description: Student may contact the instructor or department for information.

RSC 8185 Problems in Rehabilitation Science
1-3 credit(s), max credits 3, 3 completions allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Nuckley PhD, David J
Description: Student may contact the instructor or department for information.

RSC 8188 Teaching Practicum
A-F only, 1-5 credit(s), max credits 5, 1 completion allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Patterson, Robert Patrick
Description: Student may contact the instructor or department for information.

RSC 8188 Teaching Practicum
A-F only, 1-5 credit(s), max credits 5, 1 completion allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Mathiowetz PhD, Virgil G
Description: Student may contact the instructor or department for information.

RSC 8188 Teaching Practicum
A-F only, 1-5 credit(s), max credits 5, 1 completion allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Anderson, Kathleen
Description: Student may contact the instructor or department for information.

RSC 8188 Teaching Practicum
A-F only, 1-5 credit(s), max credits 5, 1 completion allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Di Fabio, Richard P
Description: Student may contact the instructor or department for information.

RSC 8188 Teaching Practicum
A-F only, 1-5 credit(s), max credits 5, 1 completion allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Snow MD, PhD, LeAnn M
Description: Student may contact the instructor or department for information.

RSC 8188 Teaching Practicum
A-F only, 1-5 credit(s), max credits 5, 1 completion allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Anderson, Kathleen
Description: Student may contact the instructor or department for information.

RSC 8188 Teaching Practicum
A-F only, 1-5 credit(s), max credits 5, 1 completion allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Mathiowetz PhD, Virgil G
Description: Student may contact the instructor or department for information.

RSC 8188 Teaching Practicum
A-F only, 1-5 credit(s), max credits 5, 1 completion allowed; prereq [Rehabilitation science student or program permission], instr consent;
Instructor: Ludewig, Paula M
Description: Student may contact the instructor or department for information.
RELS 1201 The Bible: Context and Interpretation
3 credit(s); prereq credit will not be granted if credit already received for: ReIA 3201, CNES 1201, CNES 3201, JwSt 1201, JwSt 3201; Credit will not be granted if credit has been received for: CNES 3201; Meets CLE req of Literature; Instructor: STAFF
Description: Where did the Hebrew Bible (?Old Testament?) come from? In what way do the worldviews and traditions expressed by its ancient authors compare with those of the superpowers of their day, including the Canaanites (from Ugarit), the Hittites, the Egyptians, and the Mesopotamians? How did the text of the Hebrew Bible come to represent a millennium of beliefs, desires, and customs from ancient Israel and Judah, many of which still reverberate in our society today? In integrating a cross-disciplinary spectrum of religion, history, and literature, students in this class will read, analyze, and interpret Hebrew Bible texts in English, using methods employed by biblical scholars. This class fulfills the Liberal Education Requirement of Literature because in it students read the Hebrew Bible as ancient literature, asking questions about language and meaning, literary effects, and the Hebrew Bible’s social and historical contexts. Since we will engage in secular study only, analytically examining all relevant religious texts and traditions, students are required to have an open mind and willingness to read and discuss the Bible in a new way.

RELS 3535 Death and the Afterlife in the Ancient World
3 credit(s); prereq credit will not be granted if credit already received for: ReIA 3535, ReIA 5535, CNES 3535, CNES 5535; Credit will not be granted if credit has been received for: CNES 3535; Meets CLE req of Arts/Humanities; Instructor: Selliew,Philip
Description: In this class we study attitudes, beliefs, and behaviors regarding death and the afterlife found in the cultures of the ancient Mediterranean and Near East. Our sources include literature, funerary art and epitaphs, as well as archaeological evidence for burial practices and care of the dead. Our approach is both historical and comparative. With its focus on a matter of central concern to human societies, this course meets the Liberal Education core requirement in Humanistic Studies. One main objective is to have us confront and explore a diverse set of responses to death and beliefs about the afterlife as found in ancient societies that despite their influence may be more or less familiar to us. Art, literature, and mortuary practices alike help class participants query our own expectations and attitudes. This approach enables us to consider our experiences and expectations of death and what may follow through a critical, analytical framework of historical and cultural comparison and not merely as personal response. The themes of mortality and care of the dead carry through all the topics, arranged more or less chronologically and geographically to consider Egypt, Mesopotamia, Biblical Israel, Greece, Rome, early Judaism, and ancient Christianity. We pay attention to the historical circumstances of each culture and the specific interpretive strategies historians need to understand and interpret its characteristic features in light of our own. The fourth discussion essay or the final research paper may treat beliefs or practices surrounding death in a contemporary context that a student would like to analyze from the perspective of the course. The course will be web enhanced.
RC 3301 Clinical Practice I
S-N only, 4 credit(s); prereq BAS respiratory care major;
Instructor: King, Vanessa Lea
Description: Students begin a series of rotations including 18 different clinical areas at the Mayo Medical Center. Each rotation requires completion of specific competencies. Those areas include 9 intensive care units, the operating room, emergency room, general floor care areas, pulmonary function labs, sleep disorders center, smoking cessation clinic, pulmonary rehabilitation program, home care, and an outpatient clinic. Students will perform respiratory care procedures and diagnostic testing with the supervision of a clinical instructor. In cooperation with Mayo School of Health Sciences, Rochester.

RC 3401 Seminar in Respiratory Care I: Case reports and Fundamentals of Research
A-F only, 1 credit(s); prereq 2210;
Instructor: Plevak, David Joseph
Description: Students will attend weekly conferences and seminar to discuss cases of clinical importance in respiratory care. The professional medical literature will be critically reviewed both from the standpoint of scientific method and clear writing style. Students will review patient cases with attention to events that required problem solving and critical thinking. Students will collaborate on a class research project leading to abstract submission. (1 hour either Pulmonary & Critical Care Medicine Case Conference or Combined Crit Care Conference and 2 hour seminar weekly. In cooperation with Mayo School of Health Sciences, Rochester.

RC 3601 Clinical Research Concepts and Practice
A-F only, 3 credit(s); prereq RC or RTT major;
Instructor: Plevak, David Joseph
Description: Students will review the process of research with a focus on applications in health science fields. The course provides study content in statistics, research study design including problem statement development and protocol development, research questions or hypothesis development, feasibility, sampling methods and instruments, data management, data analysis and interpretation, and dissemination of research. Concepts in analysis include both descriptive and inferential statistics.

RC 4111 Advanced Adult Respiratory Critical Care Techniques
A-F only, 3 credit(s); prereq 3102, BAS RC student;
Instructor: Plevak, David Joseph
Description: Students will focus on topics relevant to providing respiratory care to critically ill adults. There will be an emphasis on reviewing case examples of cardiopulmonary problems and therapeutic procedures. However, a multi-organ system-wide patient approach will be maintained. Advanced competencies in ventilator management and critical care monitoring procedures including hemodynamic monitoring will be assured by laboratory experiences. In cooperation with Mayo School of Health Sciences, Rochester.

RC 4201 Subspecialization in Respiratory Care: Advanced Perinatal and Pediatric Respiratory Care
A-F only, 2 credit(s); prereq 3102, BAS RC student;
Instructor: STAFF
Description: This didactic course combined with its clinical counterpart will allow students to assume the role of the perinatal/pediatrics specialist as defined by National Board for Respiratory Care's (NBRC). A thorough review of the literature on mechanical ventilation, mechanics applied with emphasis on an evidence-based care will be provided. Current strategies for extended mechanical ventilation or other forms of long-term support will be reviewed using case study examples. (32 hours of class; 32 hours of laboratory) In cooperation with Mayo School of Health Sciences, Rochester.

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RC 4202 Subspecialization in Respiratory Care: Advanced Cardiopulmonary Diagnostics
A-F only, 2 credit(s); prereq 3102, BAS RC student; Instructor: King, Vanessa Lea
Description: Students will review the rationale and methods used in cardiopulmonary diagnostics. This course along with its clinical counterpart will allow students to assume the role of the advanced pulmonary function technologist and completing the NBRC’s CPFT & RPFT specialty board exams. Procedures in which participants would become competent would include inert gas and body plethysmographic measurement of lung capacity, diffusion studies, bronchial provocation, and heart & lung function during maximal exercise. Interpretation of results and quality control in the laboratory will be facilitated by case reviews and laboratory experiences. (32 hours of class; 32 hours of laboratory) In cooperation with Mayo School of Health Sciences, Rochester.

RC 4203 Subspecialization in Respiratory Care: Cardiopulmonary Rehabilitation, Disease Prevention, Case Mgmt
A-F only, 1 credit(s); prereq 3102, BAS RC student; Instructor: STAFF
Description: Students will review the delivery of care to chronically ill patients with lung and heart disorders with emphasis on respiratory care. The rehabilitation process will be applied to hospital-based programs, extended care facilities and in the home. Topics include clinical testing, exercise prescriptions, and practice guidelines for management. Patient case reviews as part of the laboratory will underscore the multidisciplinary approach to case management and responsibilities unique to the respiratory therapist. This course along with its clinical counterpart will allow students to perform the responsibilities attributed to this subspecialty in respiratory care. Students will become certified asthma educators. In cooperation with Mayo School of Health Sciences, Rochester.

RC 4496 Subspeciality Clinical Practicum in Advanced Respiratory Care I
S-N only, 3 credit(s); prereq 3302, BAS respiratory care major; Instructor: King, Vanessa Lea
Description: This clinical session continues to assist the student in the achievement of clinical competencies. Students will complete required advanced level clinical competency exams. The student’s understanding of the methodology behind the treatment technique and their critical thinking ability will be assessed. During this session, students rotate through dosimetry and participate in radiation treatment planning.

RM 2196 Work Experience in Retail Merchandising
S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent; Instructor: Johnson, PhD Kim KP
Description: Student may contact the instructor or department for information.

RM 2198 Work Experience in Retail Merchandising
S-N only, 1-4 credit(s), max credits 8; prereq Plan submitted/approved by [adviser, internship supervisor], written approval of supervisor, instr consent; Instructor: Wu, Juanjuan
Description: Students will review the rationale and methods used in retail merchandising. This course along with its clinical counterpart will allow students to assume the role of the advanced retail merchandising function technologist and completing the NBRC’s CPFT & RPFT specialty board exams. Procedures in which participants would become competent would include retail merchandising [major or minor] or instr consent
Credit will not be granted if credit has been received for: DHA 3242 or 4242; Instructor: Kim, Hye-Young
Description: Theory and research related to the designed environment across retail channels. Upon completion of this course, students should be able to: -- Analyze the importance of retail environments as stimuli to consumer behavior. -- Develop sensitivity to sustainability issues in retailing. -- Identify, synthesize, and critique research and theories applicable to various retailing formats and environments. -- Design, develop, and conduct original research focusing on retail environments. -- Develop and refine critical writing skills in communicating and disseminating scholarship.

RM 3201 Career and Internship Preparation for Retail Merchandising
A-F only, 1 credit(s); prereq Retail merchandising major credit will not be granted if credit already received for: DHA 3201; Instructor: Fredrickson, Heather Nagle
Description: Strategic Career Planning for students in Retail Merchandising - Discover your strengths, learn what career opportunities fit with your major and develop top-notch skills and materials to land you an ideal internship or job! The focus of this course is to increase your awareness, knowledge and skills associated with the career identification and internship/job search process. Through this course you will gain an understanding of the relationship of interests, skills, personality, and work values to career choice. Each topic will convey information that will be applicable for a lifetime of career development and employment change. Learning job search strategies and developing application skills are intended to increase your level of self-confidence in this process. You will: examine your skills, interests and individual strengths; learn about retail-related careers and companies; produce a resume and sample cover letter that best represent your experience and career interests to potential employers; learn networking and internship/job search techniques, including identifying employment listings and conducting employer research; learn how to research and prepare for salary negotiation; prepare for and practice an interview; and develop an action plan and set career related goals. This is an interactive course, which also includes individual practice/mock interviews with Career Professionals and a Career Panel.
Style: 55% Lecture, 10% Discussion. Class Activities Grading: 50% reports/papers, 40% special projects, 10% class participation.

RM 3242 Retail Buying
A-F only, 3 credit(s); prereq [[1201 or DHA 1201], [2215 or DHA 2215 or 3245], [MATH 1031 or MATH 1051 or MATH 1142 or MATH 1151 or MATH 1155 or MATH 1271], [jr or sr], retail merchandising [major or minor] or instr consent
Credit will not be granted if credit has been received for: DHA 3242 or 4242; Instructor: Kim, Hye-Young
Description: An overview of the merchandising principles and mathematics needed for retail planning, buying, and selling. Lectures in class will be very concept focused with problem examples. The instructor will explain concepts and the use of formulas and then have you work through practice problems assigned from your textbook. You should bring your textbook and a calculator to each class period.
Style: 60% Lecture, 10% Discussion, 10% Small Group Activities, 10% Guest Speakers, 10% Web Based.
Grading: 15% mid exam, 15% final exam, 10% quizzes, 30% additional semester exams, 30% problem solving.
Exam Format: Fill in the blank questions and math questions

RM 4117W Retail Environments and Human Behavior
A-F only, 3 credit(s); prereq 2215 or DHA 2215, [jr or sr or grad student], [DHA major or minor or instr consent] credit will not be granted if credit already received for: DHA 4117W; Meets CLE req of Writing Intensive;
Instructor: Fredrickson, Heather Nagle
Description: Theory and research related to the designed environment across retail channels. Upon completion of this course, students should be able to: -- Analyze the importance of retail environments as stimuli to consumer behavior. -- Develop sensitivity to sustainability issues in retailing. -- Identify, synthesize, and critique research and theories applicable to various retailing formats and environments. -- Design, develop, and conduct original research focusing on retail environments. -- Develop and refine critical writing skills in communicating and disseminating scholarship.

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RM 4160H Honors Capstone Project
A-F only, 2 credit(s); prereq Retail merchandising honors;
Instructor: Johnson Ph.D. Kim KP
Description: Student may contact the instructor or department for information.

RM 4160H Honors Capstone Project
A-F only, 2 credit(s); prereq Retail merchandising honors;
Instructor: Wu, Juanjuan
Description: Student may contact the instructor or department for information.

RM 4160H Honors Capstone Project
A-F only, 2 credit(s); prereq Retail merchandising honors;
Instructor: Kim, Hye-Young
Description: Student may contact the instructor or department for information.

RM 4193 Directed Study in Retail Merchandising
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;
Instructor: Johnson Ph.D. Kim KP
Description: Student may contact the instructor or department for information.

RM 4193 Directed Study in Retail Merchandising
A-F only, 1-4 credit(s), max credits 8; prereq Undergrad, instr consent;
Instructor: Kim, Hye-Young
Description: Student may contact the instructor or department for information.

RM 4196 Internship in Retail Merchandising
S-N only, 1-4 credit(s), max credits 4, 1 completion allowed; prereq Completion of at least one-half of professional sequence, plan submitted/approved in advance by [adviser, internship supervisor], written consent of faculty supervisor, instr consent; Credit will not be granted if credit has been received for: ADES 4196;
Instructor: Johnson Ph.D. Kim KP
Description: Student may contact the instructor or department for information.

RM 4196 Internship in Retail Merchandising
S-N only, 1-4 credit(s), max credits 4, 1 completion allowed; prereq Completion of at least one-half of professional sequence, plan submitted/approved in advance by [adviser, internship supervisor], written consent of faculty supervisor, instr consent; Credit will not be granted if credit has been received for: ADES 4196;
Instructor: Wu, Juanjuan
Description: Student may contact the instructor or department for information.

RM 4196 Internship in Retail Merchandising
S-N only, 1-4 credit(s), max credits 4, 1 completion allowed; prereq Completion of at least one-half of professional sequence, plan submitted/approved in advance by [adviser, internship supervisor], written consent of faculty supervisor, instr consent; Credit will not be granted if credit has been received for: ADES 4196;
Instructor: Kim, Hye-Young
Description: Student may contact the instructor or department for information.

RM 4216 Retail Promotion and Consumer Decision Making
A-F only, 4 credit(s); prereq 2215, [jr or sr or grad student], [DHA major or minor or instr consent]; Credit will not be granted if credit has been received for: APST 5216;
Instructor: Johnson Ph.D. Kim KP
Description: Student may contact the instructor or department for information.

RUSS 1101 Beginning Russian I
5 credit(s); Credit will not be granted if credit has been received for: RUSS 4101;
Instructor: STAFF
Description: The beginning Russian course develops the four basic language skills--speaking, understanding, reading, and writing--in a balanced, highly integrated manner. Students do regularly assigned grammar exercises, listen to CD's, and are required to participate in each class section. Active control of Russian structure is the principal criterion of evaluation.
Style: 30% Lecture. instructor guided oral exercises
Grading: 25% final exam, 70% quizzes, 5% other evaluation.
Exam Format: fill in, translation to Russian, open-ended response

RUSS 1101 Beginning Russian I
5 credit(s); Credit will not be granted if credit has been received for: RUSS 4101;
Instructor: Williams, Denise Elizabeth
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. This course is the first in a two-course sequence on Beginning Russian. Upon completion of the two courses, a student can expect to be able to pronounce Russian words with reasonable correctness; compose grammatically correct, simple, sentences; understand Russian as spoken conversationally; respond appropriately to common requests; and read everyday Russian with the aid of a dictionary. In order to speak Russian effectively, you would need to get practice speaking Russian with others.
Style: This is a printed correspondence section.
Grading: 20% mid exam, 30% final exam, 50% written homework.
Exam Format: Supervised, in-person exams

RUSS 1101 Beginning Russian I
5 credit(s); Credit will not be granted if credit has been received for: RUSS 4101;
Instructor: Jahn, Gary R
Description: The Beginning Russian course develops the four basic language skills--speaking, understanding, reading, and writing--in a balanced, highly integrated manner. Students do regularly assigned grammar exercises, listen to tapes, and are required to participate in each class session. Active control of Russian structure is the principal criterion of evaluation.
Style: 30% Lecture. instructor guided oral exercises
Grading: 25% final exam, 25% quizzes, 40% class participation, 15% other evaluation.
Exam Format: fill in the blanks, answer questions, translation

RUSS 1102 Beginning Russian II
5 credit(s); prereq 1101 or equiv; Credit will not be granted if credit has been received for: RUSS 4102;
Instructor: STAFF
Description: The Beginning Russian course develops the four basic language skills - speaking, understanding, reading, and writing - in a balanced, highly integrated manner. Students do regularly assigned grammar exercises, listen to tapes, and are required to participate in each class session. Active control of Russian structure is the principal criterion of evaluation.
Style: 30% Lecture. instructor guided oral exercises
Grading: 40% final exam, 40% quizzes, 20% class participation.
RUSS 1102 Beginning Russian II
5 credit(s); prereq 1101 or equiv; Credit will not be granted if credit has been received for: RUSS 4102;
Instructor: Williams, Denise Elizabeth
Description: This course is a printed distance learning section (known as a correspondence course) offered through Online and Distance Learning, College of Continuing Education. You work independently, not as part of a student group. Visit "Class URL" for ODL policies, including fee and financial aid restrictions. This course is the second in a two-course sequence on Beginning Russian. Upon completion of the two courses, a diligent student can expect to be able to pronounce Russian words with reasonable correctness; compose grammatically correct sentences; understand Russian as spoken conversationally; respond appropriately, if briefly, to common requests; and read everyday Russian with the aid of a dictionary. In order to speak Russian effectively, you would need to get practice speaking Russian with others.
Style: This is a printed correspondence section.
Grading: 20% mid exam, 30% final exam, 50% written homework.
Exam Format: Supervised, in-person exams

RUSS 3001 Intermediate Russian I
5 credit(s); prereq 1102 or instr consent; Credit will not be granted if credit has been received for: RUSS 4103;
Instructor: STAFF
Description: This course continues the development of the four basic language skills -- speaking, understanding, reading, and writing. Students prepare regularly assigned written exercises, listen to CD's and videos, work with computer instructional programs and participate in class activities. Active control of the language for communication in all modalities is the goal of instruction and the main criterion of evaluation.
Style: 30% Lecture. Instructor guided oral activities
Grading: 30% final exam, 60% quizzes, 10% class participation.
Exam Format: Fill in, translation to Russian, open-ended response.

RUSS 3101 Advanced Russian I
4 credit(s); prereq 3002 or instr consent;
Instructor: STAFF
Description: General objectives: reviewing and in-depth studying of grammar; developing and improving oral and written skills; developing cultural sensitivity through the use of realia and contexts.
Style: 20% Lecture, 50% Discussion. Grammar exercises
Grading: 20% mid exam, 30% final exam, 10% reports/papers, 20% quizzes, 10% in-class presentation, 10% class participation.

RUSS 3311 Russian Major Project
A-F only, 3 credit(s); prereq Advanced Russian major; Credit will not be granted if credit has been received for: RUSS 3311H;
Instructor: STAFF
Description: This 3-credit course is designed for and required of all students majoring in Russian, except for Honors students (see Russ 3312). It consists of writing a research paper of no less than 20 typed double-spaced pages, under the guidance of two faculty members in the Russian program. Topics are chosen by students in consultation with their faculty advisors. Students have scheduled individual meetings with the advisors. The Director of Undergraduate Studies coordinates all projects, and students should consult her/him before signing up for the course. Projects should show evidence of original thinking, the ability to analyze, and to present arguments effectively. Unacceptable projects include book reports, plot summaries, or translations. The project should be linked to the student's course work within the Russian major, i.e. the student should have some academic background in a particular area before undertaking to write a paper in that area. The language of the paper should be English. The paper should have, however, present evidence of appropriate use of Russian-language sources.

RUSS 3311H Honors Major Project in Russian
A-F only, 3-4 credit(s), max credits 4, 1 completion allowed; prereq Advanced Russian major; Credit will not be granted if credit has been received for: RUSS 3311;
Instructor: STAFF
Description: This course is designed for and required of all Honors students majoring in Russian. It consists of writing a research paper of no less than 35 typed double-spaced pages, under the guidance of two faculty members in the Russian program. Candidates for summa cum laude need three faculty readers, one of whom should be outside the Russian department. Topics are chosen by students in consultation with their faculty advisors. Students have scheduled individual meetings with the advisors. The Director of Undergraduate Studies coordinates all projects, and students should consult her/him before signing up for the course. Projects should show evidence of original thinking, the ability to analyze, and to present arguments effectively. Unacceptable projects include book reports, plot summaries, or translations. The project should, in some way, be linked to the student's course work within the Russian major, i.e., the student should have some academic background in a particular area of study before undertaking to write a paper in that area. The language of the paper should be English. The paper should present evidence of appropriate use of Russian-language sources.
Style: 25% Discussion. Guided research
Grading: 100% other evaluation. Finished research paper

RUSS 3421 Literature: Middle Ages to Dostoevsky in Translation
3 credit(s); Credit will not be granted if credit has been received for: RUSS 5421; Meets CLE req of Global Perspectives; meets CLE req of Literature;
Instructor: Jahn, Gary R
Description: This is an historical survey of the development of Russian literature from its origins in the tenth century until the onset of the most celebrated period in Russian literary history, that of Realism, in the middle of the 19th century. The course consists of a combination of lecture and class discussions. Students will read a representative sampling of works from various periods. These will include selections from Old Russian Literature (chronicle accounts, hagiographic works, "The Life of Archpriest Avvakum", and others) and from the literature of the 18th century (selections from Lomonosov, Sumarokov, and Karamzin). Approximately three-fifths of the course will be devoted to the literature of the first half of the 19th century. Students will read works by Pushkin, Gogol, Dostoevsky, and Turgenev. All told, required reading amounts to approximately 2,000 pages. Grades in this course are based upon performance on the mid-term and final examinations, on contributions to class discussion, and on the quality of the term paper. The term paper is not required for those enrolled in Russian 3421 but required of those enrolled in Russian 5421.
Style: 50% Lecture, 50% Discussion.
Grading: 30% mid exam, 50% final exam, 20% class participation.

RUSS 3512 Russian Art and Culture
3 credit(s);
Instructor: Walter, Ronald F.
Description: Student may contact the instructor or department for information.

RUSS 3993 Directed Studies
1-4 credit(s), max credits 4, 1 completion allowed; prereq instr consent, dept consent, college consent;
Instructor: STAFF
Description: The purpose of this course, offered at the discretion of the faculty, is to provide individualized instruction to undergraduate students wishing to pursue specialized topics not
RUSS 4101 Beginning Russian I
3 credit(s); prereq Fourth sem course in another language or grad student; Credit will not be granted if credit has been received for: RUSS 1101; Instructor: Schweikert,Maria S Description: Student may contact the instructor or department for information.

RUSS 4101 Beginning Russian I
3 credit(s); prereq Fourth sem course in another language or grad student; Credit will not be granted if credit has been received for: RUSS 1101; Instructor: Walter,Ronald F. Description: Student may contact the instructor or department for information.

RUSS 4101 Beginning Russian I
3 credit(s); prereq Fourth sem course in another language or grad student; Credit will not be granted if credit has been received for: RUSS 1101; Instructor: Jahn,Gary R Description: Student may contact the instructor or department for information.

RUSS 4103 Intermediate Russian I
3 credit(s); prereq 4102, fourth sem course in another language or grad student]; Credit will not be granted if credit has been received for: RUSS 3001; Instructor: Schweikert,Maria S Description: Student may contact the instructor or department for information.

RUSS 4103 Intermediate Russian I
3 credit(s); prereq 4102, fourth sem course in another language or grad student]; Credit will not be granted if credit has been received for: RUSS 3001; Instructor: Polakiewicz,Leonard Anthony Description: Student may contact the instructor or department for information.

RUSS 5421 Literature: Middle Ages to Dostoevsky in Translation
3 credit(s); Credit will not be granted if credit has been received for: RUSS 3421; Instructor: Jahn,Gary R Description: This is an historical survey of the development of Russian literature from its origins in the tenth century until the onset of the most celebrated period in Russian literary history, that of Realism, in the middle of the 19th century. The course consists of a combination of lecture and class discussions. Students will read a representative sampling of works from various periods. These will include selections from Old Russian Literature (chronicle accounts, hagiographic works, "The Life of Archpriest Avvakum", and others) and from the literature of the 18th century (selections from Lomonosov, Sumarokov, and Karamzin). Approximately three-fifths of the course will be devoted to the literature of the first half of the 19th century. Students will read works by Pushkin, Gogol, Dostoevsky, and Turgenev. All told, required reading amounts to approximately 2,000 pages. Grades in this course are based upon performance on the mid-term and final examinations, on contributions to class discussion, and on the quality of the term paper. The term paper is not required for those enrolled in Russian 3421 but required of those enrolled in Russian 5421. Style: 50% Lecture, 50% Discussion. Grading: 30% mid exam, 50% final exam, 20% class participation.

RUSS 5993 Directed Studies
1-4 credit(s), max credits 16, 4 completions allowed; prereq instr consent , dept consent , college consent ; Instructor: STAFF Description: The purpose of this course, offered at the discretion of the faculty, is to provide individualized instruction to advanced undergraduate and graduate students wishing to explore specialized topics not covered in regular course offerings. The number of faculty in the Russian program being small, no more than 3-5 students per year can be thus accommodated, preference is given to students in their final year of the Russian major and to graduate students in Russian Area Studies. The content and procedures of this course vary widely, depending upon agreement between student and instructor, and the number of credits for which the course is taken. Students must consult the Director of Undergraduate Studies in the Russian unit before registering for this course.

Style: guided research and discussion Grading: 100% other evaluation. student's work evaluated on the basis of variable course criteria

Scandinavian
192 Klaeber Court

SCAN 3011 Readings in Scandinavian Languages
4 credit(s); prereq [Dan or Nor or Swed][1004 or 4004] or instr consent; Instructor: STAFF Description: The purpose of the Scandinavian 3011 class is to help you improve your reading knowledge and writing skills in your primary Scandinavian language and to build a reading knowledge of the other Scandinavian languages. We will read and screen various texts in Swedish, Norwegian and Danish, and discuss and analyze them, both as a whole class and in smaller groups. You will also write journal entries and short assigned writings, do several in-class presentations, and research, revise and polish a 5-6 page semester paper in your primary Scandinavian language. Among the topics and genres the texts in this course will explore are multi-ethnic and multicultural identity, globalization, social satire, crime fiction, news events of the moment, and currents in life, culture and society in contemporary Denmark, Norway, and Sweden.

SCAN 3502 Scandinavian Myths
3 credit(s); Meets CLE req of Global Perspectives; meets CLE req of Literature; Instructor: Liberman,Anatoly Description: Although less known to the general public than tales from Ancient Greece and Rome, the tales that have come down to us from Medieval Scandinavia are as interesting and important as those. We will read two main sourcebooks of Scandinavian mythology, known as the Elder Edda (the first half) and the Younger Edda (most of it); a textbook will supplement the main texts. The course will introduce the students to the body of the only myths extant in the Germanic-speaking world and to the foundations of mythological thinking. The original language of the Scandinavian myths is Old Icelandic, but all the reading will be in English. Lectures (the main medium of this course) will alternate with discussion. There will be a take-home midterm and a take-home final based on the material of the lectures and the textbook (essay questions in both); also a paper, about five pages long, will be required. The course spans the areas of mythology, religion, literature, and cultural anthropology. No prerequisites.

Style: 80% Lecture, 20% Discussion. Grading: 20% mid exam, 40% final exam, 40% reports/papers. Exam Format: Essay.

SCAN 3505 Scandinavian Fiction From 1890 to Present
3 credit(s); Instructor: Stockenstrom,Goran K Description:...
Description: This course deals with the dilemma of representation in the 20th century and takes as its starting point the shift at the turn of the century from a mimetic/objective representation anchored in time and space to the subjective presentation of interior realities within the realm of imagination. A representative selection of Scandinavian texts spanning a period of 100 years of revolutionary changes in all domains of human experience, offers the students a depth and breadth of insights into the value patterns and myths of the individual cultures as well as the hegemonies that constitute the Nordic culture. This body of literature serves to illustrate how different Scandinavian authors seek to find new forms for changing historical situations. The different movements in the arts and literatures from the 20th century are reflected with varying emphasis in the evolving aesthetics on the continuum from realism to expressionism. At the same time the dialectical changes in the aesthetic forms cannot be understood without familiarity with the changing social, political and economic realities that in turn caused the former.

Style: 50% Lecture, 50% Discussion.
Grading: 30% reports/papers, 50% special projects, 20% class participation.
Exam Format: Take-home exam. Final covers texts and criticism in the form of essay questions.

SCAN 3601 Great Literary Works of Scandinavia
3 credit(s); Meets CLE req of Literature;
Instructor: Houe, Poul

Description: The course examines major works of Scandinavian literature from the Middle Ages to the present: An Icelandic saga (13th C); tales by Hans Christian Andersen and a philosophical novel by Kierkegaard (early to mid 19th C); plays by Ibsen and Strindberg and a novel by Hamsun (late 19th C); poems by Edith Sodergran (early 20th C); and recent international bestsellers by Scandinavian masters and newcomers. Danish, Norwegian, Swedish, Finland-Swedish, and Icelandic literature are represented almost equally, and while the emphasis is on literature after the modern breakthrough, the historical dimension will not be neglected, and all texts will be discussed in their social, cultural, and artistic context. A guiding hypothesis throughout the course will be that for readers and writers to find their own stories, they must tell and retell the stories of the world. During the course we will explore how this has been done by great Scandinavian writers.

Style: 40% Lecture, 30% Discussion, 30% Small Group Activities.
Grading: 30% final exam, 50% reports/papers, 20% class participation.
Exam Format: Essay/take-home exam

SCAN 3993 Directed Studies
1-4 credit(s), max credits 12, 12 completions allowed; prereq instr consent, dept consent, college consent;
Instructor: STAFF

Description: Guided individual reading or study. The student approaches an appropriate professor with a topic of interest, and if the professor has time and is willing to guide the student, the student, along with the professor, fills out a form which is available in the department office (205 Folwell). On this form, they specify the topic, reading and study materials, and form of evaluation.

Style: 50% Lecture, 50% Discussion.
Grading: 80% reports/papers, 20% class participation.
Exam Format: passage to be translated with questions on grammar

SCAN 5502 The Icelandic Saga
3 credit(s);
Instructor: Grimstad, Kaaren E

Description: How would you like to spend your fall with shape-shifters, dragons and dragon-slayers, witches and wizards, man-eating ghouls and giants? These are some of the characters from traditional Icelandic folklore and legend that you will meet in the 13th-century Icelandic sagas. The course surveys the historical-fictional prose chronicles, known as sagas, written in 13th-century Iceland, tales of the great heroes and families of late Viking-Age Iceland. We will read a selection of these sagas and attempt to understand both how they are structured and what they tell us about medieval Icelandic society. Students will read some critical studies of sagas and participate in group discussions. Target audience includes undergraduates and non-majors, as well as graduates and majors.

Style: 50% Lecture, 50% Discussion.
Grading: 80% reports/papers, 20% class participation.
in class, you will observe ESL classes taught at the University and in the Twin Cities. An internship at a school or agency teaching ESL is required. The class will support the internship experience as you and your fellow students analyze the instructional settings and your teaching practices during the week.

**Style:** 30% Lecture, 40% Discussion, 30% Laboratory.

**Grading:** 30% reports/papers, 15% quizzes, 15% in-class presentation, 15% class participation, 25% other evaluation.

**Institutional Setting:** Internship Teaching

**Exam Format:** Short answer essay

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**SLS 3501 Practical Language Learning for International Communication**

**3 credits(s);**

**Instructor:** Cohen, Andrew David

**Description:** Going to study abroad to learn a new language and culture, or have you just returned from such an experience? What are your strengths as a language learner? This course is all about getting a better handle on language learning? having a better sense of your own learning style preferences and language strategy preferences for a given language-learning or language-use task. During the course, you also explore your motivation to learn languages in general and a given language in particular, and your motivation to do specific language tasks. Ideally, the course not only makes you more awake of yourself as a language learner, but also enhances your ability to succeed at learning and using languages now and in the future, at home and abroad. The objectives of the course are: (1) to provide you a better sense of what it means to learn a new language, (2) to engage you fully in diagnosing your own learning style preferences, language strategy repertoire, culture learning strategies, and motivation when performing language tasks (through completion of a series of inventories), (3) to have you conduct empirical data collection with three language learners of you choosing, as a means of improving your ability to diagnose others’ language learning abilities, practices, and potential, and (4) to have you participate in a series of classroom exercises intended to simulate real language learning and performance situations, and to have you reflect in pairs, in small groups, and in whole-class discussions regarding what you have gained from these activities. The topics include: (a) second language (L2) learning: popular ideas, explaining the process, describing learner language, and individual differences in L2 learning, (b) learning styles, (c) language learner strategies, (d) cultural values and culture. (e) strategies in the language skill areas: listening, speaking, reading, writing, grammar learning, vocabulary, pronunciation, and nonverbal communication. (f) describing approaches to L2 teaching and learning in the classroom, and (g) revisiting popular ideas about L2 language learning. Maximum of 50 students; presentations by the instructors and by teams of students, discussion, interactive exercises, extensive small group work, and use of WebVista. Lightbown, P. M. & Spada, N. 2006. How languages are learned. (2nd ed.) Oxford: Oxford Univ. Press. Paige, R. M., Cohen, A. D., Kappler, B., Chi, J. C., & Lassegard, J. P. (2006). Maximizing Study Abroad: A Students’ Guide to Strategies for Language and Culture Learning and Use. (2nd ed.) Minneapolis, MN: CARLA. Class sessions are approximately 20% lecture, 40% discussion, and 40% paired and small-group activities. About 40-50 pages of reading per week, 20 pages of writing per semester. Written midterm project, 3 quizzes on course concepts, and a written final project, evidence of having read the assigned readings, and active participation in class discussions and exercises.

**Style:** 20% Lecture, 30% Discussion, 20% Small Group Activities, 20% Student Presentation, 10% Guest Speakers. Group tasks, groups of 2-3 will lead a portion of the class sessions.

**Grading:** 50% reports/papers, 30% quizzes, 5% attendance, 10% in-class presentation, 5% class participation.

**Exam Format:** Short-answer questions - on 3 quizzes, no exam.

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**SLS 5401 Language Analysis for Teachers of English as a Second Language**

**4 credits(s); prereq Ling 3001 or Ling 5001 or instr consent;**

**Instructor:** STAFF

**Description:** This course provides an overview of the structure of the English language that is specifically geared to the needs of teachers of English to speakers of other languages (both ESL and EFL). While not focusing on pedagogical issues per se, it will view the structures of English from the point of view of second language speakers as well as analyzing the ways in which native speakers use the language. The core function of the course is to make clear the links between theoretical concepts in linguistics and the structure of the language produced by native speakers of English. SLS 5401 is the first of a two-semester sequence. In SLS 5401 we will cover English phonetics and phonology, basic morphology of English, and the grammar of the simple sentence in English, including word order, subject-verb agreement, verb tense and aspect, modals, negation, and question formation.

**Style:** 25% Lecture, 25% Discussion, 20% Laboratory, 30% Small Group Activities.

**Grading:** 30% reports/papers, 50% quizzes, 10% in-class presentation, 10% class participation. (Class participation Includes online discussions.)

**Exam Format:** Short answer, essay, syntactic tree diagrams, phonetic transcription

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**SLS 5805 Basics of Second Language Acquisition for Teachers**

**3 credits(s); prereq LING 3001 or 3001H or 5001 or instr consent;**

**Instructor:** Tarone, Elaine E

**Description:** Students will learn the basic findings of research on second language acquisition, and work with video clips of language learners to explore the characteristics of their learner language, and reflect on implications of that exploration, both for SLA theory and pedagogy. Students will carry out a case study of one language learner.

**Style:** 15% Lecture, 25% Film/Video, 25% Discussion, 35% Laboratory.

**Grading:** 40% special projects, 60% laboratory evaluation.

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**SLS 5910 Seminar in Teaching English as a Second Language**

**3 credits(s), max credits 9, 3 completions allowed;**

**Instructor:** Lazaraton, Anne

**Description:** Student may contact the instructor or department for information.

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**SLS 5993 Directed Studies**

**1-4 credits(s), max credits 9, 9 completions allowed; prereq instr consent, dept consent, college consent;**

**Instructor:** STAFF

**Description:** In order to obtain Directed Studies credit through TESL 5993, students must fill out a Student/Faculty Contract for Directed Study. On the form, the student indicates the title of the project, the number of desired semester credits (1-4), the learning objectives associated with it, methods and resources to be used (books, articles, etc.), and also indicate how the results of the project will be evaluated. Then a Faculty Member for ESL must approve it and sign as the supervisor for the project. Forms are available in the department office.

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**Security Technologies West Bank Office Building**

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**ST 8111 Methods, Theory, and Applications**

**A-F only, 2 credit(s);**

**Instructor:** Isle, Brian Archer

**Description:** Student may contact the instructor or department for information.

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**ST 8112 Technology for Homeland Security**

**A-F only, 2 credit(s);**

**Instructor:** Polla, Dennis L

**Description:** Student may contact the instructor or department for information.

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**ST 8221 Communications of Risk and Security**

**A-F only, 1 credit(s); prereq MSST grad student;**
University of Minnesota - Course Guide for Twin Cities Campus

Social Work
105 Peters Hall

SW 1905 Freshman Seminar
1-3 credit(s), max credits 6; prereq Fr;
Instructor: Baizerman, Michael Leon
Description: A course on "images of youth" can be about the many actual and possible representations of young people. As such, a course would examine a variety of notions about youth, the actual persons and "youth" the representation. Examination could be about the personal, social, and cultural spaces between actual (young) persons and their images and other representations, and how these vary (or not) by historical period, social arena, "true self", ethnicity/race, geography, social class, sex/gender, language, and the like. Attention could be given to how these representations are (are not) embedded in larger reticula of scientific and lay theories of these people, their "stage of life"; what is "natural" about their being as they are and doing as they so and what is "essential" (and/or the essence) of their person(hood) and of the images which portray them in the popular media, in scientific theories, in novels, films and plays, and in music, poetry, and art, for instance. This seminar will explore some of these and some other related themes in pursuit of responses to the focal questions of this course: How are youth portrayed in a variety of media; how are they represented, and what are some images of youth which seem to guide our collective and individual responses to real world, everyday-life youth, and how are these images used by young people and adults to fashion their multiple identities in everyday life and in the reflective, personal self. In the University, "youth" is a subject (and object) "owned" by many academic disciplines and professions, and there can be (and is) disagreement between and among these about "the true nature" of these persons, the best ways to "enhance their healthy development" and to facilitate their "growing up" and "coming of age", and their place(s) within family, neighborhood, community, and nation. That is, "youth" is "contested terrain" and the vocabulary and rhetorics of this ongoing, but always changing (somewhat) "youth discourse" will also be a focus of this course. Framed thus, it is clear that there are a vast array of traditional disciplines and professions contributing theories, concepts and images to our subject. Any one of these can invite life-long inquiry and many will be new to you. That's inevitable and fine, because while you are experts in how you did (are doing) your youth, you are not expected to be so on the many ways you are represented in our culture and society. Indeed, that's why we are together in this Seminar - to explore and try to understand how (and why ) youth are portrayed as they are. By the end of our work together, we both will have a better grasp of the issues, questions, responses, and answers.
Style: 30% Lecture, 10% Film/Video, 40% Discussion. 20%

Field Visits.
Grading: Grading is finalized after negotiated assignments/papers.

SW 3701 Introduction to Child Maltreatment: Intervention and Prevention
3 credit(s);
Instructor: STAFF
Description: This course is designed as an introduction to the study of family violence across the lifespan. It will introduce students to history, current theories, research, and policies in the areas of child maltreatment and the larger domain of family violence. The content of the course focuses on current theories, research and policies on violence against women (battering, sexual assault, stalking), child maltreatment (physical and sexual abuse, emotional abuse, neglect) and abuse of vulnerable adults (elderly, non-elderly vulnerable populations). This course is an introduction to the topic. It will give students a basic overview of the issues across types of family violence intervention and prevention and how societies have responded through public policy. The course will also integrate issues of gender, race, culture, age, physical ability, and sexual orientation throughout our examination of these topics. This course is designed to meet the social science diversified core requirement of the University's Liberal Education Requirement. There are no prerequisites for this course, it is open to all undergraduates and serves as the first required course in the Family Violence Prevention Minor. Other required courses in the Minor cover prevention, intervention and gender violence in global perspectives. As such, this course will emphasize theories, research and policies with a focus on family violence against child and adults in North America.
Style: 25% Lecture, 10% Film/Video, 25% Discussion, 10% Demonstration, 10% Field Trips, 20% Guest Speakers.
Grading: 15% mid exam, 20% final exam, 10% special projects, 20% written homework, 15% reflection paper, 20% class participation. Written Homework=online assignments.

SW 3702 Introduction to Adult Intimate Partner Violence: Intervention and Prevention
3 credit(s);
Instructor: STAFF
Description: This course is designed as an introduction to the study of Intimate Partner Violence (IPV) in the adult population. It will introduce students to current theories, research, and prevention practice in the area of family violence. The content of the course focuses on the intervention and prevention of intimate partner violence, including preventing violence against women (battering, sexual assault, stalking) and abuse of vulnerable adults (elderly, non-elderly vulnerable populations) within the United States. A major emphasis in this course will be on prevention of adult IPV and social interventions aimed at ending violence in families once it occurs. This includes direct work with victims of abuse, assailants, and their families as well as community-level and policy interventions. The course will also integrate issues of gender, race, culture, age, physical ability, socio-economic status, and sexual orientation throughout our examination of these topics. This course is open to all undergraduates and serves as a required course in the Family Violence Prevention Minor. Because other required courses in the Minor cover child maltreatment and gender violence in global perspectives, this course will emphasize prevention and intervention practices with a focus on family violence against adults in North America.
Style: 15% Lecture, 15% Film/Video, 25% Discussion, 20% Small Group Activities, 5% Student Presentation, 10% Guest Speakers, 15% Service Learning.
Grading: 25% reports/papers, 10% special projects, 30% reflection paper, 10% in-class presentation, 5% class participation. 20% is Service Learning

SW 3703 Gender Violence in Global Perspective
3 credit(s);
Instructor: STAFF
Description: This course examines gender violence in its multiple forms from a global perspective. An introduction to the
history of violence against women, current theories and research
on the causes of violence in intimate relationships, past and
current responses, and interventions and prevention models to
address this worldwide problem will be discussed. Understanding
the multiple approaches for addressing gender
violence will provide students the knowledge to describe
culturally competent intervention and prevention strategies.
Style: 20% Film/Video, 25% Discussion, 15% Small Group
Activities, 15% Field Trips, 25% Guest Speakers.
Grading: 50% reports/papers, 25% attendance, 25% reflection
paper.

SW 4693 Directed Studies
1-10 credit(s), max credits 10, 1 completion allowed; prereq
instr consent;
Instructor: LaLiberte PhD,Traci Lee
Description: Student may contact the instructor or department
for information.

SW 5051 Human Behavior and the Social Environment
A-F only, 2-3 credit(s), max credits 3, 1 completion allowed;
prereq Grad student or 8 cr social sciences or instr consent;
Instructor: Kivnick,Helen Quintessa
Description: Student may contact the instructor or department
for information.

SW 5101 Historical Origins and Contemporary Policies and
Programs in Social Welfare
A-F only, 3-4 credit(s), max credits 4, 1 completion allowed;
prereq Grad or 8 sem cr of social sciences;
Instructor: Morrissey,Megan Harrison
Description: Student may contact the instructor or department
for information.

SW 5811 Social Work Ethics
2 credit(s); prereq credit will not be granted if credit
received for: 8801, grad student or non-degree seeking
student or instr consent;
Instructor: Jones,Linda E
Description: Student may contact the instructor or department
for information.

SW 8010 Seminar: Field Practicum I
S-N only, 1-8 credit(s), max credits 8; prereq 8201;
Instructor: Gilbert,MJ
Description: Student may contact the instructor or department
for information.

SW 8020 Field Practicum II
S-N only, 1-6 credit(s), max credits 6; prereq 8010;
Instructor: Dimock,Peter Trier
Description: Student may contact the instructor or department
for information.

SW 8020 Field Practicum II
S-N only, 1-6 credit(s), max credits 6; prereq 8010;
Instructor: Morcomb,Denise Charlot
Description: Student may contact the instructor or department
for information.

SW 8020 Field Practicum II
S-N only, 1-6 credit(s), max credits 6; prereq 8010;
Instructor: Maxwell,Steve
Description: Student may contact the instructor or department
for information.

SW 8020 Field Practicum II
S-N only, 1-6 credit(s), max credits 6; prereq 8010;
Instructor: Gilbert,MJ
Description: Student may contact the instructor or department
for information.

SW 8030 Advanced Standing Social Work Practicum
S-N only, 1-8 credit(s), max credits 8; prereq Adv standing;
Instructor: Walthour,Kate Ann
Description: Student may contact the instructor or department
for information.

SW 8030 Advanced Standing Social Work Practicum
S-N only, 1-8 credit(s), max credits 8; prereq Adv standing;
Instructor: Morcomb,Denise Charlot
Description: Student may contact the instructor or department
for information.

SW 8030 Advanced Standing Social Work Practicum
S-N only, 1-8 credit(s), max credits 8; prereq Adv standing;
Instructor: Gilbert,MJ
Description: Student may contact the instructor or department
for information.

SW 8030 Advanced Standing Social Work Practicum
S-N only, 1-8 credit(s), max credits 8; prereq Adv standing;
Instructor: Presslein MSW,LICSW,Heidi M.
Description: Student may contact the instructor or department
for information.

SW 8041 Specialized Field Placement
S-N only, 3-4 credit(s); prereq 8030, MSW adv-standing;
Instructor: Maxwell,Steve
Description: Student may contact the instructor or department
for information.

SW 8051 Psychopathology and Social Work Practice
A-F only, 3 credit(s); prereq All foundation courses for full
program or advanced standing or instr consent ;
Instructor: Keefe,Daniel A
Description: Student may contact the instructor or department
for information.

SW 8051 Psychopathology and Social Work Practice
A-F only, 3 credit(s); prereq All foundation courses for full
program or advanced standing or instr consent ;
Instructor: Aby,Martha Jane
Description: Student may contact the instructor or department
for information.

SW 8052 Resilience and Risk
A-F only, 3 credit(s); prereq [Foundation coursework, adv
standing] or instr consent ;
Instructor: Gilgun,Jane F
Description: Student may contact the instructor or department
for information.

SW 8201 Social Work Methods: Practice With Individuals and
Systems
A-F only, 3 credit(s); prereq MSW student;
Instructor: Dimock,Peter Trier
Description: Student may contact the instructor or department
for information.

SW 8201 Social Work Methods: Practice With Individuals and
Systems
A-F only, 3 credit(s); prereq MSW student;
Instructor: Rooney,Ronald H
Description: Student may contact the instructor or department
for information.

SW 8201 Social Work Methods: Practice With Individuals and
Systems
A-F only, 3 credit(s); prereq MSW student;
Instructor: Presslein MSW,LICSW,Heidi M.
Description: Student may contact the instructor or department
for information.
Systems
A-F only, 3 credit(s); prereq MSW student;
Instructor: Gonzalez,Christina Marie
Description: Student may contact the instructor or department for information.

SW 8301 Advanced Child Welfare Practice
A-F only, 3 credit(s); prereq All foundation courses for full program or advanced standing or instr consent;
Instructor: Rooney, Ronald H
Description: Student may contact the instructor or department for information.

SW 8303 Advanced Mental Health Practice with Adults
A-F only, 3 credit(s); prereq 8051 or Concurrent registration is required (or allowed) in 8051 or all foundation courses for full program or advanced standing or instr consent;
Instructor: Shannon, Patricia Jean
Description: Student may contact the instructor or department for information.

SW 8303 Advanced Mental Health Practice with Adults
A-F only, 3 credit(s); prereq All foundation courses for full program or advanced standing or instr consent;
Instructor: Gearity PhD, Anne R
Description: Student may contact the instructor or department for information.

SW 8304 Advanced Practice With Children and Adolescents
A-F only, 3 credit(s); prereq All foundation courses for full program or advanced standing or instr consent;
Instructor: Hoy, Judith M
Description: Student may contact the instructor or department for information.

SW 8501 Planning, Marketing, and Program Development
A-F only, 3 credit(s); prereq [Foundation curriculum, advanced standing] or instr consent;
Instructor: Long, Anne Little
Description: Student may contact the instructor or department for information.

SW 8505 Advanced Community Organization and Advocacy
A-F only, 3 credit(s); prereq [Foundation curriculum, advanced standing] or instr consent;
Instructor: Lightfoot, Elizabeth Bradford
Description: Student may contact the instructor or department for information.

SW 8602 Direct Practice Evaluation
A-F only, 2 credit(s); prereq 8601 or equiv or instr consent;
Instructor: Van Slyke, Victoria D
Description: Student may contact the instructor or department for information.

SW 8602 Direct Practice Evaluation
A-F only, 2 credit(s); prereq 8601 or equiv or instr consent;
Instructor: Lum, Terry
Description: Student may contact the instructor or department for information.

SW 8603 Program Evaluation
A-F only, 2 credit(s); prereq 8601 or equiv or instr consent;
Instructor: Menanteau, Dario
Description: Student may contact the instructor or department for information.

SW 8603 Program Evaluation
A-F only, 2 credit(s); prereq 8601 or equiv or instr consent;
Instructor: Hollister, C David
Description: Student may contact the instructor or department for information.

SW 8702 Advanced Social Work Practice With Diverse Populations
A-F only, 2 credit(s); prereq All foundation courses for full program or advanced standing or instr consent;
Instructor: Gilbert, MJ
Description: Student may contact the instructor or department for information.

SW 8702 Advanced Social Work Practice With Diverse Populations
A-F only, 2 credit(s); prereq All foundation courses for full program or advanced standing or instr consent;
Instructor: Gibson, Priscilla A
Description: Student may contact the instructor or department for information.

SW 8702 Advanced Social Work Practice With Diverse Populations
A-F only, 2 credit(s); prereq All foundation courses for full program or advanced standing or instr consent;
Instructor: Fisher, Colleen
Description: Student may contact the instructor or department for information.

SW 8871 Social Work Research Seminar I
A-F only, 3 credit(s); prereq Soc wk PhD student or instr consent;
Instructor: Edleson, Jeffrey L
Description: Student may contact the instructor or department for information.

SW 8875 Research Practicum
S-N only, 2 credit(s), max credits 6, 3 completions allowed;
prereq Soc wk PhD student or instr consent;
Instructor: Lightfoot, Elizabeth Bradford
Description: Student may contact the instructor or department for information.

Social and Administrative Pharmacy
7-155 Weaver-Densford Hall

SAPH 8100 Seminar
A-F only, 1 credit(s), max credits 8, 8 completions allowed;
prereq Grad SAPh major or instr consent;
Instructor: Schommer, Jon C
Description: Student may contact the instructor or department for information.

SAPH 8200 Research Problems
1-8 credit(s), max credits 16, 16 completions allowed;
prereq Grad SAPh major or instr consent;
Instructor: Oliveira PhD, Djanese R
Description: Student may contact the instructor or department for information.

SAPH 8235 Pharmaceutical Economics and Policy
A-F only, 3 credit(s); prereq Grad SAPh major or instr
Sociology

909 Social Sciences Tower

SAP 9255 Pharmaceutical Marketing
A-F only, 3 credit(s); prereq Grad SAPH major or instr consent;
Instructor: Schommer, Jon C
Description: Student may contact the instructor or department for information.

SAP 8500 Pharmacy and Its Environment
A-F only, 3 credit(s); prereq Grad SAPH major or instr consent;
Instructor: Hadsall, Ronald S
Description: Student may contact the instructor or department for information.

SAP 8700 Hospital Pharmacy Administration
A-F only, 3 credit(s); prereq Grad SAPH major or instr consent;
Instructor: Knoer PharmD, Scott J
Description: Student may contact the instructor or department for information.

SOC 1001 Introduction to Sociology
4 credit(s); prereq Soc majors/minors must register A-F; Credit will not be granted if credit has been received for: SOC 1011V; Meets CLE req of Social Sciences;
Instructor: Liebler, Carolyn
Description: In this course, the student is encouraged to develop his or her sociological imagination and to apply it to the world around us. In the first section of the semester, we focus on ways in which culture, socialization, social interactions, and social control affect our day-to-day lives. Then we investigate the impacts of four key master statuses: social class, gender, race, and living as an American. These master statuses have fundamental but sometimes subtle effects on the opportunities and constraints that each of us face. In the final section of the course, we focus on a variety of other aspects of the social world (family, education, and globalization, for example) to further understand how personal troubles can be seen and analyzed as public issues using core theories and the student's sociological imagination.
Style: 50% Lecture, 10% Film/Video, 30% Discussion, 10% Small Group Activities.
Grading: 16% mid exam, 16% final exam, 24% reports/papers, 16% additional semester exams, 14% class participation, 14% laboratory evaluation.
Exam Format: Multiple choice questions, short answer, and short essay

SOC 1011V Intensive
A-F only, 4 credit(s); prereq honors; Credit will not be granted if credit has been received for: SOC 1001; Meets CLE req of Social Sciences; meets CLE req of Writing Intensive;
Instructor: Meier, Ann
Description: This course is intended to provide an overview of the discipline of sociology including some of the main sub-fields and different theoretical approaches to understanding social life. The course will be a seminars style course where participants will be expected to engage in discussions of assigned readings and extend the ideas learned in the class to current issues of social interest. We will use real observations from community service learning as an important component of understanding social forces.

SOC 1571 Sociology
A-F only, 3 credit(s); prereq Only Rochester-admitted students will be able to enroll in this course; Meets CLE req of Diversity and Soc Justice US; meets CLE req of Social Sciences;
Instructor: Dingel, Molly J.
Description: Introduction to foundational ideas and research techniques in sociology. Includes a critical engagement with core concepts, including the sociological imagination, socialization, culture, the interplay between individuals and institutions, and social stratification.

SOC 3003 Social Problems
A-F only, 3 credit(s); prereq 1001 recommended; soc majors/minors must register A-F;
Instructor: Logan, Eno
Description: How do we decide that something is a social problem, and what do we do about it? How do race, class and gender impact our understandings of social problems in the contemporary United States? Who is primarily responsible for addressing social problems-- individuals, the government, churches, schools, or other institutions? In this class, we will examine some of the major social problems facing the United States today. Specially, we focus on controversies surrounding the 1) American family, 2) crime and punishment, 3) the distribution of wealth & income, 4) the degradation of the environment, and 5) Science, Medicine, and Health. In order to illustrate the issues to be discussed, we will watch segments from a number of recent documentary films such as Everything's Cool, Daddy & Papa, The Boys of Baraka and A Hard Straight
Style: 30% Lecture, 25% Film/Video, 45% Discussion.
Grading: 20% mid exam, 20% final exam, 40% reports/papers, 20% class participation.
Exam Format: essay, as well as multiple choice and true/false

SOC 3101 Introduction to the American Criminal Justice System
A-F only, 3 credit(s); prereq Soc majors/minors must register A-F; Credit will not be granted if credit has been received for: SOC 1011V; Meets CLE req of Social Sciences;
Instructor: Abdi, Cawo
Description: This course introduces the pivotal questions that underpin classical and contemporary sociological perspectives. Analysis of how society is possible and how social order is maintained are core to an understanding of individuals as both agents and objects that shape and are shaped by their membership in society. Examining this close relationship between the individual, society, and social structures permits us to understand the dynamics of social and power relations in everyday living. The course explores diverse sociological theories purporting to explain the social, political and economic structures prevailing in our society. It also centralizes the importance of social change and the forces that drive or/and hinder change. A key objective of this course is to foster students' critical thinking abilities in their analysis of societal issues, and in their articulations of these issues. Students are expected to be able to apply sociological theories and debates into their everyday practices.
Style: 50% Lecture, 20% Film/Video, 30% Discussion.
Grading: 20% final exam, 30% quizzes, 30% reflection paper, 10% class participation, 10% laboratory evaluation. reaction papers
Exam Format: Short answer format

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
A-F only, 3 credit(s); prereq Soc majors/minors must register A-F credit will not be granted if credit has been received for Soc 3111; Meets CLE req of Civic Life and Ethics; meets CLE req of Social Sciences;

Instructor: Samaha, Joel B

Description: Overview and analysis of the U.S. criminal justice system. The course stresses three themes: 1. the balance between the government's power to control crime and the rights of individuals; 2. the appropriate decision making criteria (seriousness of offense, criminal history of offenders, and strength of evidence) and the illegal criteria (race, ethnicity) that can infect decision-making in the major crime control agencies (police, courts, and corrections); 3. the evaluation of criminal justice policies and practices (Do they work? Are they legal? Are they fair? Are they smart?). The course describes, analyzes, and provides information and arguments to stimulate you to think critically about crime control in a constitutional democracy. Topics include crime, trends in crime, criminals and their families; victims and their families; crime control in a constitutional democracy; criminal law; police roles and culture, police strategies, and police and the Constitution; charging suspects; prosecuting, defending, and sentencing defendants; probation and incarceration; and prisoner reentry into society. (Eventually, they all come home.) No prior knowledge of the criminal justice system is required.

Style: 55% Lecture, 5% Film/Video, 20% Discussion, 10% Small Group Activities, 5% Guest Speakers. 1. documentary videos of police, courts, corrections; 2. Guest lecturers are Minnesota criminal justice professionals, including police officers, prosecutors, defense attorneys, judges, and corrections officials

Grading: 10% class participation, 90% other evaluation. 3 NONCUMULATIVE exams + a NONCUMULATIVE final%

Exam Format: multiple choice, True/False, and short essays

SOC 3102 Introduction to Criminal Behavior and Social Control

3 credit(s); prereq Soc majors/minors must register A-F credit will not be granted if credit has been received for Soc 3111;

Instructor: Ferrales, Gabrielle

Description: This course will address the social and legal origins of crime and crime control. We will focus on general theories of deviance/crime and present an overview of forms of social control. We will critically examine criminological, sociological and legal theories that explain the causes of crime. This course covers diverse types of crime, including: street crime, violent crime, white-collar crime, occupational crime, war crimes and torture. In addition, we will examine the punishment of crime, including policing, prosecuting, defense attorneys, sentencing, and mass incarceration. There will be a particular focus on how crime and forms of social control impact social inequality and divisions around race, class, and gender.

Style: 45% Lecture, 5% Film/Video, 45% Discussion, 5% Small Group Activities.

Grading: 35% mid exam, 35% final exam, 30% reports/papers.

Exam Format: Essay and short answer (1 mid-term, 1 final)

SOC 3211W American Race Relations

A-F only, 3 credit(s); prereq Soc majors/minors must register A-F; Meets CLE req of Diversity and Soc Justice US; meets CLE req of Social Sciences; meets CLE req of Writing Intensive;

Instructor: Logan, Enid

Description: This course is designed to provide you with an understanding of the contours of race in the post-civil rights era United States. Our goal is to examine the myriad ways that race structures American society and influences the experiences and life chances of all its members. In the opening sections of the class, we will study definitions of race and major theories of how race and racism work in the contemporary U.S. The next unit begins with an overview of the concept of racial identity, and asks how social location impacts one's identity and daily interactions. After inquiring into the general process of identity formation, we look at the specific experiences of whites, African Americans, Asian Americans, Latinos, Native Americans, and multiracial Americans. Though our central focus is on race relations in today's society, we also provide a historical overview of the experiences of each group in order to help explain their present-day social status. The next part of the course examines the significance of race in several specific contexts. We look at controversies over race and immigration, race and education, and race and popular culture. We close the class by considering the future of race relations in the U.S., and evaluating remedies to racial inequality.

Style: 35% Lecture, 15% Film/Video, 45% Discussion.

Grading: 15% final exam, 45% reports/papers, 20% in-class presentation, 20% class participation.

SOC 3322W Social Movements, Protests, and Change

3 credit(s); prereq 1001 or instr consent; soc majors/minors must register A-F; Meets CLE req of Civic Life and Ethics; meets CLE req of Writing Intensive;

Instructor: Gentile, Joseph Howard

Description: Student may contact the instructor or department for information.

SOC 3681 Gender and the Family in the Islamic World

A-F only, 3 credit(s); prereq At least soph; 1001 recommended;

Instructor: Abdi, Cawo

Description: Student may contact the instructor or department for information.

SOC 3701 Social Theory

A-F only, 4 credit(s); prereq 1001 recommended; soc majors/minors must register A-F;

Instructor: Broadbent, Jeffrey Paul

Description: The course describes general principles about how the world works. This is true for theories in physics and biology as well as in sociology or economics. Theories are not always right, but at least they encourage us to think about the bigger picture, beyond the narrow circle of our personal lives. And sometimes theories are right, and give us reliable instruction about the world. One job of science is to find out which theories are right by testing them against evidence. Because social life is complicated, sociological theories can never be as exact as those of physicists. But good social theories can help us understand our social world in new and helpful ways. In this class, we develop the coverage of social theory from the classical and founding works of Marx, Durkheim and Weber, through more contemporary ideas such as feminism, rational choice, racism, and post-modernity. Throughout this class, we have three goals: to learn to read and understand key theoretical work in sociology; to use this work to better understand the social world around us; and to better develop our own capacity to talk and write about the world using ideas from theory.

Style: 80% Lecture, 10% Film/Video, 10% Discussion.

Grading: 15% mid exam, 20% final exam, 20% reports/papers, 30% additional semester exams, 2% attendance, 10% reflection paper, 3% class participation.

Exam Format: The tests are designed to evaluate your mastery of the concepts and ideas covered by the readings, lectures and discussions. The questions will be mostly short-answer and essay. The first three tests are worth 150 points each. The fourth is 200.

SOC 3702W Social Theory

A-F only, 4 credit(s); prereq 1001 recommended; soc majors/minors must register A-F;

Instructor: Hull, Kathleen E

Description: This course provides an introductory overview of major social theories ranging from the foundational sociological theories of Marx, Weber and Durkheim to current theories of postmodernism and globalization. We will examine a range of theories with particular attention to their treatments of core sociological questions and concerns, including: What holds human societies together? How do societies reproduce themselves? What are the key sources of social conflict, and how are they resolved or contained? What are the significant features of modernity, and what are the implications of modernity for social life? How are social identities created, sustained or transformed, and what effect? Where is society headed in the future? The goals of the course are to deepen students?
understanding of the significance of such questions and to provide a preliminary survey of theories that have tackled these questions from the late 19th century to the present. For present and future sociology majors, the course provides an indispensable background for subsequent work in the discipline. For all others, it provides an invitation to think about some of the most vital questions that confront us all as reflective and self-aware members of our communities and our world. The course design is premised on the idea that the best way to learn and understand sociology is by seeing its connection to contemporary issues and concerns. Therefore, the primary theory readings in this course are paired with writings that illustrate the relevance of these theories to contemporary concerns or that directly apply the theories to current issues and questions.

Style: 60% Lecture, 10% Film/Video, 20% Discussion, 10% Small Group Activities.
Grading: 35% mid exam, 35% final exam, 30% quizzes.
Exam Format: multiple choice, short answer and essay

SOC 3721 Principles of Social Psychology
3 credit(s); prereq 1001 recommended; soc majors/minors must register A-F;
Instructor: Mortimer, Jeynie T
Description: Principles of Social Psychology Social psychology is at the intersection of ?macro? and ?micro? sociology. This class will illuminate the dynamic linkages among social organization, interaction processes, attitudes, and the self. Students will learn principles of social psychology drawn from multiple theoretical perspectives, including symbolic interactionism, expectation states theory, social structure and personality, and the life course. The course will cover a broad range of topics as well as the diverse methods that social psychologists use to study them (for example, experiments, surveys, ethnographic observation). The class will show the relevance of the classic literature of social psychology to contemporary social problems and issues, including rapid social and technological change, inequality (based on gender, race/ethnicity, occupation, wealth), discrimination, torture, and terrorism.
Style: 50% Lecture, 5% Film/Video, 10% Discussion, 35% Small Group Activities.
Grading: 25% mid exam, 25% final exam, 50% reports/papers.
Exam Format: Short essay.

SOC 3801 Sociological Research Methods
4 credit(s); prereq 1001 recommended; soc majors must register A-F;
Instructor: Macmillan, Ian Ross
Description: This course introduces basic ideas and methods for conducting social science research. It teaches students to understand, plan and conduct research, as well as to evaluate and critique sociological work. It emphasizes three dimensions of research: general issues of methodology and research design, quantitative approaches to research, and qualitative approaches to research. The course is intended for sociology majors and should be taken before beginning the program's required major project. We will use lectures, discussions, lab exercises, and several 'hands-on' research assignments.
Style: 30% Lecture, 20% Discussion, 30% Laboratory.
Interactive Exercises:
Grading: 35% reports/papers, 20% quizzes, 15% laboratory evaluation, 30% other evaluation. Quizzes
Exam Format: Short Answer, Essay

SOC 3811 Basic Social Statistics
4 credit(s); prereq Intermediate algebra recommended; Meets CLE req of Quantitative Thinking;
Instructor: Bian, Yanjie
Description: This course will introduce sociology majors to basic statistical measures and procedures that are used to describe and analyze quantitative data in sociological research. The topics include (1) displays of frequency and percentage distributions, (2) measures of central tendency and dispersion, (3) measures of association and correlation, (4) bivariate regression, and (5) basics about probability and statistical inference. Lectures on these topics will be given in class meetings, and lab exercises are designed to help students learn statistical skills needed to analyze quantitative data provided in the class. In addition to attendance to lectures and labs, students are expected to read 15-20 pages of the text per week. There will be a midterm exam and a final exam. Students will need a calculator for assignments and exams.
Style: 65% Lecture, 35% Laboratory.
Grading: 70% mid exam, 30% problem solving.
Exam Format: multiple choice, computational problems

SOC 4090 Topics in Sociology: Transnational Activism
3 credit(s), max credit 6; prereq Soph or above or instr consent; 1001 recommended; soc majors/minors must register A-F;
Instructor: Aminzade, Ron R
Description: Student may contact the instructor or department for information.

SOC 4101W Sociology of Law
A-F only, 3 credit(s); prereq [1001, 3101, 3102] or [3111, 3701] recommended; soc majors/minors must register A-F;
Meets CLE req of Writing Intensive;
Instructor: Boyle, Elizabeth Heger
Description: Law is an institution of enormous social impact, where the most pressing and controversial issues of our time are debated (e.g., When is a collection of cells a human being? Should the state be allowed to kill juveniles who commit crimes? Who owns electronic information?). Sometimes people turn to law for protection and relief: at other times, they seek to avoid it at all costs. Law can be a force for achieving equality and redistributing power in society; yet it can also be conservative, rooted in age-old traditions and customs, with tightly controlled boundaries. Law is located in myriad places, from university codes of conduct to international treaties on torture. It permeates every aspect of modern life. In this course, students will learn about the sources, content, and impact of law from a sociological perspective.
Style: 25% Lecture, 15% Film/Video, 25% Discussion, 25% Small Group Activities, 10% Guest Speakers.
Grading: 45% mid exam, 15% reports/papers, 20% special projects, 10% quizzes, 10% in-class presentation.

SOC 4108 Current Issues in Crime Control
3 credit(s); prereq Soc majors/minors must register A-F;
Instructor: Macmillan, Ian Ross
Description: This course will survey and evaluate recent theory, research, and policy statements on the causes and control of interpersonal violence. In recent decades, violence has become increasingly prominent as a focus of public concern. Governments and academic bodies have supported numerous commissions and research projects on the causes and consequences of violence. Similarly, public and criminal justice policy in countries across the globe has stressed the desire for more effective control strategies. The major goal of this course is to evaluate theory, research, and policy on interpersonal violence in light of existing sociological theory and research.
Style: 60% Lecture, 10% Film/Video, 30% Discussion.
Grading: 30% mid exam, 20% final exam, 40% reports/papers, 10% quizzes.
Exam Format: multiple choice, short answer, essay

SOC 4161 Criminal Law in American Society
3 credit(s); prereq 3101 or 3102 or 3111 or instr consent; soc majors/minors must register A-F;
Instructor: Samaha, Joel B
Description: What's criminal law and what's it good for? Should we punish people only for what they do? or for what they might do? or even someone who they are? What are the justifications and excuses for committing crimes? Topics: Bill of Rights and Criminal law; elements of crime prosecution has to prove beyond a reasonable doubt; accomplices; criminal attempts; defenses of justification (self-defense, defense of home) and defenses of excuse (insanity, age, syndromes); criminal homicide; criminal sexual conduct; terrorist crimes. Read and discuss actual cases edited for non lawyers. Intensive class
SOC 4305 Society and the Environment: A Growing Conflict
A-F only, 3 credit(s); prereq 1001 or environmental course recommended; soc majors/minors must register A-F;
Instructor: Broadbent, Jeffrey Praed
Description: Human society and the natural environment have always affected each other, but with the growth of population, technology and prosperity, the human effect has magnified greatly. These days, our impact is changing the entire ecological system of the planet with potentially disastrous affects for all living creatures. Global warming, as well as species extinction and the decline of coral reefs and rainforests exemplify these trends. To reduce these problems, humans need to rapidly learn new ways to build satisfying and just societies on a very low energy budget, with most of that energy coming from non-fossil fuel sources. Environmental sociology studies the social causes for our worsening relation with the environment and also how we can improve this situation. The class will cover readings on the ideas of environmental sociology with examples of their use to analyze the causes of environmental problems and their solutions as well. Along with lectures, students will do exercises designed to give you new ways of seeing environmental problems, and also write short essays on selected issues. We will have some pop quizzes and two essay exams.
Style: 60% Lecture, 40% Discussion.
Grading: 25% mid exam, 25% final exam, 24% special projects, 5% quizzes, 21% written homework.
Exam Format: essay

SOC 4321 Globalize This! Understanding Globalization through Sociology
A-F only, 3 credit(s); prereq Soc majors/minors must register A-F;
Instructor: Goldman, Michael R
Description: From the factories of Shanghai to the high plateaus of Bolivia to the trading floors of New York city, people from around the world are becoming increasingly interdependent. This course offers an overview of the processes that are forcing and encouraging people's lives to intertwine economically, politically, and culturally. We will start with the most basic questions: What is this thing called globalization? Is it at all new? What are the forces behind it? Second, we will explore the idea that this era of globalization is marked by dramatic transformations in the ways we work, do politics, play, and communicate. Moreover, we will look into the ideas that capitalism has changed significantly, that the division between rich and poor has intensified, and that the sovereignty of governments and the basic rights of people are being challenged. We will learn about a few key actors, such as the World Bank and the World Trade Organization, and understand their main objectives and effects. We will discuss the world of immigration, of fast-moving finance capital and Hollywood/Bollywood cultural products, and the slower moving domains of everyday life, as they are experienced in Jamaica, the U.S., Mexico, India, Bolivia, Argentina, and South Africa. Along the way, we will look at globalization from below, or social movements working to bring about social change (within and across national boundaries) by contesting the worst effects of economic, political, and cultural globalization. In all, this course will use a number of texts, films, lecture, discussion, and student debates, to help us become fluent in the different scholarly concerns on globalization and its many social forces, connections, and imaginations.

SOC 4521 Love, Sex, and Marriage
3 credit(s); prereq Soc majors/minors must register A-F 1001 or instr consent; soc majors/minors must register A-F;
Instructor: Hull, Kathleen E
Description: This course will provide an overview of sociological approaches to intimate human relationships. Specific topics we will cover include love, gender and romance, dating and mate selection, sexuality, cohabitation, marriage, and divorce. The focus is on contemporary American society, but current U.S. practices are placed in historical and cross-cultural context. The goals for the course include: familiarizing you with social scientific approaches to the study of intimate human relationships and increasing your interest in the topic; challenging some of your taken-for-granted notions about what is "natural" or "normal" with regard to love, sexuality, and marriage; stimulating you to think about the impact of broad social forces (particularly the rise of modernity) on beliefs and practices related to intimate relationships; highlighting the salience of various social identities - including race/ethnicity, class, age, sexual orientation, and especially gender - to beliefs and practices around intimacy; and, introducing you to some of the significant current policy debates regarding intimate relationships, and fostering your ability to critically assess the arguments on all sides of these debates.
Style: 60% Lecture, 10% Film/Video, 20% Discussion, 10% Small Group Activities.
Grading: 40% mid exam, 30% final exam, 30% quizzes.
Exam Format: multiple choice, short answer, essay

SOC 4966W Major-Project Seminar
A-F only, 4 credit(s); prereq 1001, 3701, 3801, 3811, 12 cr upper div sociology, dept consent; Meets CLE req of Writing Intensive;
Instructor: Gerteis, Joseph Howard
Description: The College of Liberal Arts requires a paper in the major field during the senior year. This course provides the resources, assistance and encouragement necessary for majors in the Sociology Department to fulfill this requirement. The course is organized as a seminar and workshop. There are no lectures, but the instructor will present overviews of the stages of research and writing necessary to complete the senior project paper. Students will read only what is required to complete their own paper. The class is designed to walk students through each stage of the research and writing process from a sociological perspective -- including formulating a research question, reviewing the literature, designing the data collection, collecting and analyzing data, and writing up the final paper. Students build their major project through completing guided, periodic assignments. The goal is to have every student create a senior project that is interesting and rewarding, allowing students to investigate a sociological problem they personally choose and care about.
Style: 25% Lecture, 50% Discussion. Small group and individual exercises

SOC 4977V Senior Honors Proseminar I
A-F only, 3 credit(s); prereq 3701, 3801, 3811, 9 additional upper div sociology cr, sr soc honors major, dept consent; Meets CLE req of Writing Intensive;
Instructor: Savelsberg, Joachim J
Description: This course is the first of a two semester proseminar for honors students who major in sociology. The purpose is to help students develop their honors theses. We will take several steps: (1) think about ties between biography and research agendas by reading biographies of prominent scholars and linking them to their research, develop individual research questions, and write topic statements; (2) identify previous research on the chosen research topics, understand different styles of literature reviews and write literature reviews; (3) identify appropriate research methods, develop research tools and write "methods and data" sections (and clear human subjects approval where needed). This work will form the basis for the completion of each student's individual honors project in the second part of the proseminar in Spring of 2006. Each student will pursue her or his individual project while class work will guide them through the process.
Style: 40% Lecture, 60% Discussion.
Grading: 60% reports/papers, 20% in-class presentation, 20% participation.
SOC 5811 Intermediate Social Statistics
4 credit(s); prereq 3811 or equiv; primarily for 1st yr soc grad students; soc majors/minors must register A-F;
Instructor: Bian,Yanjie
Description: This course is designed for the first-year sociology graduate students. After a review of study design, descriptive statistics, and bivariate analysis in the first five weeks, the rest of the class is devoted to regression models and techniques. Grading is based on twelve weekly exercises, a midterm exam, and a term paper reporting a multiple regression analysis of social science data on a topic of student’s own choice. Labs are organized to help students with the data analyses required to complete the weekly exercises and the term paper. Each student is to make a short, ungraded oral presentation of his or her term paper outline at the last class meeting of the semester. After taking this course, all students are expected to understand and to be able to evaluate statistical results up to the level of regression models as reported in major sociology journals today, and will be ready to take courses of advanced social statistics.
Style: 70% Lecture, 30% Laboratory.
Grading: 25% mid exam, 25% reports/papers, 50% written homework.

SOC 8001 Sociology as a Profession
S-N only, 1 credit(s), max credits 2; prereq Grad soc major;
Instructor: Meier,Ann
Description: Student may contact the instructor or department for information.

SOC 8011 Sociology of Higher Education: Theory and Practice
3 credit(s); prereq Grad soc major or instr consent;
Instructor: Swartz,Teresa Toguchi
Description: Student may contact the instructor or department for information.

SOC 8148 Law, Society, and the Mental Health System
A-F only, 3 credit(s); prereq [Grad student, 4148] or instr consent;
Instructor: Malmquist,Carl P
Description: Student may contact the instructor or department for information.

SOC 8412 Social Network Analysis: Theory and Methods
3 credit(s); prereq instr consent ;
Instructor: Knoke,David H
Description: This seminar introduces social network analysis to graduate students, emphasizing its theoretical, substantive, and methodological foundations. Our collective goal is to acquire a sufficient grasp of the contemporary network literatures to pursue independent advanced study, and ultimately, to contribute original research results to our disciplines. Specifically, we’ll identify key network concepts and principles; examine data collection, measurement, and computer analysis techniques; and investigate applications in sociology, organization studies, political science, public administration, and related disciplines. Network analysis spans a diverse range of phenomena from ego-centric ties, to small work-team sociograms, to organizational relations, to trade and military alliances among nation states. Based on the summer survey of registered students’ substantive interests, we’ll concentrate on social capital, communication, personal networks, learning and innovation diffusion, intra- and interorganizational relations, social movements and collective action, political networks, international systems, and small world and Internet dynamics. About an hour of each class will be spent on network methodologies. The principles that students learn in this course will enable them to study advanced topics of their own choosing. Wasserman & Faust's encyclopedic Social Network Analysis provides our primary text, with required and background articles and chapters selected from the research literatures of several disciplines. Students will learn how to perform basic network analyses of previously collected datasets, using the UCINET computer package. We’ll also explore network visualizations using spatial plotting programs. Doctoral students in the Department of Sociology may use this course to fulfill their advanced methods requirement.
Style: 60% Lecture, 20% Discussion, 20% Student Presentation.
Grading: 40% reports/papers, 20% in-class presentation, 40% problem solving.

SOC 8551 Social Structure and the Life Course
3 credit(s); prereq Soc grad major or instr consent;
Instructor: Mortimer,Jeylan T
Description: This seminar examines the life course paradigm and some major theoretical and empirical work that flows from it. By presenting key concepts, research strategies, and empirical exemplars in life course analysis, students will be provided the intellectual tools to assess the temporal dimensions of human lives in their historical, societal, institutional, and developmental contexts. Topics to be considered: The Life Course Perspective: Antecedents and Questions The Social Structure and Personality Perspective Bringing in Temporality (historical, social, biological time): Life Course and Life Span Demography and the Life Course Classical Perspectives and Extensions Central Concepts, Premises, and Strategies of Analysis Stages, Transitions, Trajectories, and Pathways Turning Points Life Course Variability Historical Cross-national Intrasocietal (SES, Race/Ethnicity) Institutional Structuring of the Life Course The Destructuration Thesis Family Education and Work The Polity The Self and the Life Course Forces Generating Personal Continuity and Change Self as Agent Self as Reflection of Social Experience Most required readings are drawn from the Handbook of the Life Course (Mortimer and Shanahan, editors, 2003). Students will also read Biography and the Sociological Imagination: Contexts and Contingencies, by Michael J. Shanahan and Ross Macmillan. Term papers will review and evaluate a life course concept or will constitute an empirical study; students will present their papers to the seminar at the end of the semester. There are no exams.
Style: 40% Lecture, 40% Discussion, 20% Student Presentation.
Grading: 40% reports/papers, 20% in-class presentation, 40% class participation.

SOC 8701 Sociological Theory
A-F only, 4 credit(s); prereq Grad soc major or instr consent;
Instructor: Savelberg,Joachim J
Description: Student may contact the instructor or department for information.

SOC 8890 Advanced Topics in Research Methods
1-4 credit(s), max credits 12, 3 completions allowed; prereq Grad soc major, 8801, 8811 or instr consent ;
Instructor: Aminzade,Ron R
Description: Student may contact the instructor or department for information.

Software Engineering
6-202 EE/CSci

SENG 5707 The Principles of Database Systems
A-F only, 3 credit(s); prereq SEng major;
Instructor: Carls,John Vincent
Description: Student may contact the instructor or department for information.

SENG 5801 Software Engineering I: Overview, Requirements, and Modeling
A-F only, 3 credit(s); prereq SEng major;
Instructor: Heimdahl,Mats
Description: Student may contact the instructor or department for information.

SENG 5851 Software Project Management
A-F only, 3 credit(s); prereq SEng major;
Instructor: Kaman,John Francis
Description: Student may contact the instructor or department for information.

SENG 5861 Introduction to Software Architecture

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.L.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
A-F only, 3 credit(s); prerequisite: 2nd year, MSSE grad student; Instructor: Sisley, Elizabeth Marie
Description: Student may contact the instructor or department for information.

SENG 5899 Software Engineering Seminar
1 credit(s), max credits 2; prerequisite: Grad SEng major; instructor: Collins, John
Description: Student may contact the instructor or department for information.

SENG 8494 Capstone Project (Plan B Project)
S-N only, 3 credit(s); prerequisite: SEng major; instructor: Collins, John
Description: Student may contact the instructor or department for information.

SENG 8891 Independent Project
2-6 credit(s), max credits 12; instructor: Hedger, Dick
Description: Student may contact the instructor or department for information.

SENG 8891 Independent Project
2-6 credit(s), max credits 12; instructor: Carlis, John Vincent
Description: Student may contact the instructor or department for information.

SENG 8891 Independent Project
2-6 credit(s), max credits 12; instructor: Kruse, John Michael
Description: Student may contact the instructor or department for information.

SENG 8891 Independent Project
2-6 credit(s), max credits 12; instructor: Vayghan, Jamshid A.
Description: Student may contact the instructor or department for information.

SENG 8891 Independent Project
2-6 credit(s), max credits 12; instructor: Kan, Stephen Hauwah
Description: Student may contact the instructor or department for information.

SENG 8891 Independent Project
2-6 credit(s), max credits 12; instructor: Calvo, Michael Joseph
Description: Student may contact the instructor or department for information.

SENG 8891 Independent Project
2-6 credit(s), max credits 12; instructor: Schutta, Nathaniel T
Description: Student may contact the instructor or department for information.

SENG 8891 Independent Project
2-6 credit(s), max credits 12; instructor: Freese, Jesse David
Description: Student may contact the instructor or department for information.

SENG 8891 Independent Project
2-6 credit(s), max credits 12; instructor: Heimdahl, Mats
Description: Student may contact the instructor or department for information.

SENG 8891 Independent Project
2-6 credit(s), max credits 12; instructor: Srivastava, Jaideep
Description: Student may contact the instructor or department for information.

SENG 8891 Independent Project
2-6 credit(s), max credits 12; instructor: Bitzenhofer, Neil A
Description: Student may contact the instructor or department for information.

SENG 8891 Independent Project
2-6 credit(s), max credits 12; instructor: Skovbrotten, John Emil
Description: Student may contact the instructor or department for information.

Soil, Water, and Climate
439 Borlaug Hall

SOIL 1125 The Soil Resource
4 credit(s); Credit will not be granted if credit has been received for: SOIL 2125; Meets CLE req of Environment; instructor: Cooper, Terence H
Description: This course is designed for undergraduates who have completed some of the basic sciences (biology, chemistry). The course covers the 5 basic areas of: 1) Soil classification; 2) Soil formation; 3) Physical properties; 4) Biological properties; and 5) Chemical properties. Students must use the WWW to read required information before doing hands-on laboratory activities. Individual exams, team exams, lecture dyads, lab reports, land use project, and final exam are used to determine course grades. Lecture notes on the WWW.
Style: 60% Lecture, 40% Discussion.
Grading: 15% mid exam, 15% final exam, 40% quizzes, 10% laboratory evaluation, 20% other evaluation. Land use project
Exam Format: MC

SOIL 2125 Basic Soil Science
A-F only, 4 credit(s); prerequisite: [CHEM 1015, CHEM 1017] or CHEM 1021 or equiv; Credit will not be granted if credit has been received for: SOIL 1125; Meets CLE req of Environment; meets CLE req of Physical Sciences; instructor: Cooper, Terence H
Description: This course is designed for undergraduates who have completed some of the basic sciences (biology, chemistry). The course covers the 5 basic areas of: 1) Soil classification; 2) Soil formation; 3) Physical properties; 4) Biological properties; and 5) Chemical properties. Students must use the WWW to read required information before doing hands-on laboratory activities. Web exams, team exams, lecture dyads, lab reports, land-use project and final exam are used to determine course grades. Lecture notes on the WWW.
Style: 60% Lecture, 40% Discussion.
Grading: 15% mid exam, 15% final exam, 40% quizzes, 10% laboratory evaluation, 20% other evaluation. Land use project
Exam Format: MC

SOIL 3521 Soil Judging
A-F only, 1 credit(s), max credits 3, 3 completions allowed;
prereq 4511;  
Instructor: Cooper, Terence H  
Description: Students who participate in the regional or national soil judging contest are eligible in this course. Soil judging contests are in October and require 4 days of commitment. Students should have completed Soil 4511  
Style: Field trip to contest  
Grading: 100% final exam.

SOIL 4093 Directed Study  
1-7 credit(s), max credits 20, 20 completions allowed; prereq instr consent;  
Instructor: STAFF  
Description: Students who want to explore a special topic of their interest should visit with a faculty member who will direct their exploration. Report length dependent on the credits.  
Style: Independent research

SOIL 4094 Directed Research  
1-7 credit(s), max credits 7, 1 completion allowed; prereq instr consent;  
Instructor: STAFF  
Description: Students who want to do research in a special area should determine a faculty member who will guide their research activities. Research depth depends on the credits.  
Style: Independent study

SOIL 4511 Field Study of Soils  
A-F only, 2 credit(s); prereq 2125;  
Instructor: Cooper, Terence H  
Description: This is a field course that requires students to learn how to write soil profile descriptions. Students visit numerous roadcuts and determine the morphological characteristics of the soils observed. Final field exam determines the course grade. Field exam is open book. Class meetings end first week of November. Week long trip to another state for further soil investigation is possible.  
Style: 100% Laboratory.  
Grading: 100% final exam.

SOIL 5125 Soil Science for Teachers  
3 credit(s); Credit will not be granted if credit has been received for: SOIL 1125;  
Instructor: Cooper, Terence H  
Description: This course is designed for teachers who have completed some of the basic sciences (biology, chemistry). The course covers the 5 basic areas of: soil classification, soil formation, physical properties, biological properties and chemical properties. Students must use the WWW to read required information before doing hands-on laboratory activities. Lecture notes on the WWW. Students have the opportunity to prepare lesson plans for their students.  
Style: 60% Lecture, 40% Discussion.  
Grading: 40% mid exam, 10% final exam, 20% quizzes, 10% laboratory evaluation, 20% other evaluation. Land use project

SOIL 5232 Vadose Zone Hydrology  
3 credit(s); prereq [Math 1271 or equiv], [Phys 1042 or equiv];  
Instructor: Gupta, Satish C  
Description: This course is intended for undergraduates and graduate students in Soil, Water, & Climate, Water Resources, Institute of Technology, Environmental Sciences, and Natural Resources. The course covers soil physical properties and processes that govern the transport of mass and energy in soils. Major emphasis is on water and solute transport through the vadose zone and their impact on subsurface hydrology and water quality. Specific topics include energy state of soil water, soil water retention characteristics, saturated and unsaturated hydraulic conductivities, Poiseuille and Darcy laws, law of mass conservation, water flow through uniform and layered soils, water infiltration equations, mechanisms of contaminant transport, preferential flow, contaminant adsorption and decay, transport of volatile organic compound, soil thermal properties, steady and non-steady state heat flow, and convective and diffusive gas fluxes. The lectures are supplemented with hands on laboratory exercises on methods of measuring hydraulic, thermal, and gas properties of soils, and methods of characterizing water, contaminants, heat, and gas fluxes in soils. We also have one to two guest lectures from scientists working in the Environmental Consulting Companies and State Agencies.  
Style: 70% Lecture, 30% Laboratory.  
Grading: 30% mid exam, 25% final exam, 25% reports/papers, 20% problem solving.  
Exam Format: multiple choice and identification

SOIL 5555 Wetland Soils  
A-F only, 3 credit(s); prereq 1125 or 2125 or equiv or instr consent; Concurrent registration is required (or allowed) in 4511 recommended; Credit will not be granted if credit has been received for: ESPM 5555;  
Instructor: Wheeler, Daniel B  
Description: Student may contact the instructor or department for information.

SOIL 5611 Soil Biology and Fertility  
3 credit(s); prereq 2125, Biol 1009 or equiv, Chem 1021 or equiv, sr or grad; BioC 3xxx, MicB 3xxx recommended;  
Instructor: Allan, Deborah L  
Description: Student may contact the instructor or department for information.

Spanish  
808 Social Sciences Tower

SPAN 344 Advanced Medical Spanish  
S-N only, 0 credit(s); prereq Span 0144, 2 yrs. Spanish College Level or equiv, dept consent.;  
Instructor: Lopez, Maria Emilee  
Description: This is an advanced course designed to help health care professionals communicate with patients who speak Spanish. This course will further develop and strengthen language skills and cultural awareness. Individual work is done on WebCT and CD-ROM. Activities focus on vocabulary, listening, reading, writing, and exploring cultural issues. This course is partially internet delivered.  
Style: In class: Active participation; and Individual work: Variety of assignments and group discussion on WebCT.

SPAN 1001 Beginning Spanish  
5 credit(s); prereq Less than 2 yrs of high school Spanish, dept consent, no college-level Spanish;  
Instructor: STAFF  
Description: This course is strictly for students who have less than two years of high school Spanish. Permission numbers are required in order to register for this course. Students should bring their high school transcripts and an ID card to Folwell Hall 34 to obtain a number. Spanish 1001 focuses on the development of communication skills in listening, speaking, reading, and writing. One day a week students will watch “Destinos”, an educational television program in Spanish. The
text, "¿Sabias que...?" 3rd ed., is accompanied by a workbook and audio tapes or CDs that are designed to be studied outside class. In this text students will cover material from the "Leccion Preliminar" through and including "Leccion 8". Grammar is covered in the homework assignments and reinforced in class with a variety of paired and small group activities. Spanish is spoken almost exclusively in class. Since the majority of class time is devoted to speaking and listening, class attendance is critical.

Style: 5% Lecture, 10% Discussion, 1% Laboratory. Group work, reading and related activities
Grading: 20% final exam, 15% quizzes, 10% class participation, 55% other evaluation. 15% oral interview type evaluations, 10% written compositions and writing activities, 20% unit exams
Exam Format: All quizzes and tests evaluate listening, reading, vocabulary, grammar & writing. A minimum of multiple choice & true-false items; encourage the use of natural language by using short answers and essays; Two oral interviews.

SPAN 1002 Beginning Spanish
5 credit(s); prereq 1001 completed at UMNTC, dept consent; Credit will not be granted if credit has been received for: SPAN 4022;
Instructor: STAFF
Description: This course is for the student who has completed Spanish 1001 at the University of Minnesota. Upon entering this course, the student should know basic vocabulary and present past tense forms, that is to say, be familiar with the material between the "Leccion Preliminar" to "Leccion 9" of the text, "¿Sabias que...?". 3rd ed. Spanish is spoken almost exclusively in class. Spanish 1002 continues to focus on the development of communicative skills: listening, speaking, reading and writing. One day a week students watch "Destinos", an educational television program in Spanish. The text "¿Sabias que...?", 3rd ed., is accompanied by a workbook and audio tapes that are designed to be studied outside class. The readings in the text have been taken from Spanish language newspapers and magazines. Grammar is covered in the homework assignments and reinforced in class with a variety of paired and small group activities. Since the majority of class time is devoted to speaking and listening, class attendance is critical.

Style: 5% Lecture, 10% Discussion, 1% Laboratory. Group work, reading and related activities
Grading: 20% mid exam, 20% final exam, 15% quizzes, 10% class participation, 35% other evaluation. 15% oral interview type evaluations, 10% written compositions and writing activities, 10% listening and workbook exercises.
Exam Format: All quizzes and tests evaluate listening, reading, vocabulary, grammar and writing. A minimum of multiple choice & true-false items; an effort is made to encourage the use of natural language by using short answers and essays. Two oral interviews.

SPAN 1003 Intermediate Spanish
5 credit(s); prereq [1002 or 1022] or EPT placement;
Instructor: STAFF
Description: This course is for those who have completed Spanish 1022 or 1002 with C- or better, or who have taken two or more years of Spanish in high school and have successfully passed the Entrance Proficiency Test (EPT) for this level. In this course, students build on the communicative speaking, writing, listening and reading skills that were acquired in beginning Spanish. Class activities are carried out almost entirely in Spanish. For the most part, grammar should be studied at home; a small percentage of class time is intended for grammar instruction and practice. Reading skills are developed through the textbook, and writing skills are developed through a variety of writing assignments. Each student will present an oral presentation on a topic related to those covered in the textbook or in class. Because Spanish class is about the only place where a student can practice listening and speaking, class attendance is critical.

Style: 40% Discussion, communicative activities with language
Grading: 30% mid exam, 20% final exam, 15% reports/papers, 10% in-class presentation, 10% class participation, 5% laboratory evaluation, 10% other evaluation. Oral interview
Exam Format: Diverse - essay - fill in blank - short answer

SPAN 1004 Intermediate Spanish
5 credit(s); prereq 1003 or EPT placement; Credit will not be granted if credit has been received for: SPAN 1014;
Instructor: STAFF
Description: This course is for those who have successfully passed Spanish 1003 with a C- or have passed the Entrance Proficiency Test (EPT) for this level. This course is a requirement for Spanish 3015. In this course, you will build on the communicative speaking, writing, and learning and reading skills that you acquired during the first three semesters of Spanish. The "Conexiones" series, text, lab manual and workbook, are used in class. Class activities are carried out almost entirely in Spanish. For the most part, grammar should be studied at home; a small percentage of class time is intended for grammar instruction and practice. Reading skills are developed through "Conexiones", and writing skills are developed through process writing, a multi-step writing process which entails composition writing, rewrites, journals, pop-quizzes, etc. You will also prepare and present a debate with other classmates. Because Spanish class is about the only place where you can practice listening and speaking, class attendance is critical. All students in a BA, BFA of BIS degree program in the CLA must take the Graduation Proficiency Test (GPT) as a requirement of the course, unless they have already passed the GPT in this or another language.

Style: 10% Lecture. 60 - 70% discussion; 20 - 30% listening, writing, testing for comprehension and vocabulary, and peer editing.
Grading: 50% quizzes, 10% class participation, 5% laboratory evaluation. 15% written composition; 10% round-table discussion; 10% debate
Exam Format: Exams evaluate listening, reading, vocabulary & grammar, writing & culture. A minimum of multiple choice and true/false items; Encourage the use of natural language by using short answers, short/long essays. 1 debate

SPAN 1014 Business Spanish
5 credit(s); prereq 1003 or [dept consent , instr consent ]; Credit will not be granted if credit has been received for: SPAN 1004;
Instructor: STAFF
Description: This course is for those who have successfully passed Spanish 1003 with a C- or have passed the Entrance Proficiency Test (EPT) for this level. In this course, you will build on the communicative speaking, writing, listening and reading skills that you acquired during the first three semesters of Spanish. The "Pasajes" series, 4th ed: "Lengua" and Saldo a favor texts are used. Class activities are carried out almost entirely in Spanish. For the most part, grammar should be studied at home; a small percentage of class time is intended for grammar instruction and practice. Because Spanish class is about the only place where you can practice listening and speaking, class attendance is critical. All students in a BA, BFA or BIS degree program in the CLA must take the Graduation Proficiency Test (GPT) as a requirement of the course, unless they have already passed the GPT in this or another language.

Style: 10% Lecture. 60% discussion, 30% testing for comprehension and vocabulary, and peer editing, and 10% lecture
Grading: 40% mid exam, 15% final exam, 15% reports/papers, 10% in-class presentation, 10% class participation, 10% other evaluation. 10% homework
Exam Format: Listening, vocabulary, reading, short essay, grammar

SPAN 1022 Alternate Second-Semester Spanish
5 credit(s); prereq Placement above 1001; Credit will not be granted if credit has been received for: SPAN 4002;
Instructor: STAFF
Description: This class is a first year Spanish course developed for students with previous language experience. The instruction
and context are delivered by a combination of in class meetings and a wide range of online activities. The different online components were designed to help you become a more successful language learner by giving you the opportunity to explore different learning modes independently and to provide more exposure to the Spanish language. You will have the opportunity to experience different accents and regional variations, not just your instructor's, as well as a wealth of other authentic materials that would not be readily accessible in a regular classroom. For that reason the course requires a considerable amount of independent work to be completed online outside of the classroom contact hours. The regular class typically meets four days a week and the Technology-enhanced sections typically meet three days a week. All sections meet every day the first week of instruction NOTE: Students are not to schedule other classes or work on the days that the classes do not meet because some weeks classes will meet all five days and the instructors expect those 50-minute sections to be available for Spanish on short notice. The web activities are to be done outside of the classroom.

**Style:** 5% Lecture, 10% Discussion, 10% Laboratory, group work, reading and related activities

**Grading:** 20% final exam, 10% class participation, 10% laboratory evaluation, 25% other evaluation, unit exams, 15% oral interview type evaluations, 10% written compositions and journals, 10% listening and workbook exercises

**Exam Format:** All quizzes and tests evaluate listening, reading, vocabulary, grammar & writing. A minimum of multiple choice & true/false items; encourage the use of natural language by using short answers and essays. Two oral interviews.

**SPAN 1044 Intermediate Medical Spanish**

5 credit(s); prereq 1003 or equiv; Credit will not be granted if credit has been received for: SPAN 1004;

**Instructor:** STAFF

**Description:** Course designed to help health care professionals and/or students pursuing health care field communicate with patients who speak Spanish. Basic Medical vocabulary, questions and answers in common medical situations, vocabulary and phrases to conduct patient interviews and medical history, vocabulary and conversation to conduct physical exams; understanding the Latin American view of health and health care. In terms of the grammatical aspects, the course covers same areas as Spanish 1004; therefore, students planning on taking Spanish 3015 will be prepared to do so. Besides in class activities, and for a better understanding of cultural aspects, students will perform individual work on WebCT and CD-ROM which concentrate on watching and listening, reading and writing about interviews of health care providers who work with Spanish speaking community, and interactions in the target language between doctors and patients. * Evaluation standards: Students will be evaluated on class participation, discussion of course content, exploration of cultural component, therefore class attendance is critical. Evaluation of communicative speaking, writing, listening and reading is done through exams, composition writing and presentation. Application of Learning Technologies: each week online discussion of questions based on readings. The discussion requires thought about how a theme is related to aspects of interaction with the Chicano/Latino population.

**Style:** 10% Lecture, 60% Discussion. Language lab, listening, writing testing for comprehension and vocabulary and peer editing

**Grading:** 15% reports/papers, 50% quizzes, 10% in-class presentation, 15% class participation, 10% other evaluation.

round table discussion

**Exam Format:** Exam evaluates listening, reading, vocabulary & grammar, writing & culture. A minimum of multiple choice and true/false items; encourage use of natural language by using short answers, short /long reports

**SPAN 1521 Spanish I**

A-F only, 3 credit(s);

**Instructor:** Furness, Ryan C

**Description:** Student may contact the instructor or department for information.

**SPAN 1910W Freshman Seminar**

3 credit(s); prereq Fr; Meets CLE req of Writing Intensive;

**Instructor:** O'Connell, Joanna

**Description:** Student may contact the instructor or department for information.

**SPAN 3015 Spanish Composition and Communication**

4 credit(s); prereq [1004 or 1014 or 1044], LPE pass;

**Instructor:** STAFF

**Description:** Spanish 3015 is the first of the upper division sequence for Spanish majors and minors. To enroll in this class, a student must have successfully completed Spanish 1004 or Spanish 1014 or Spanish 1044 and a "High Pass" on the LPE is highly recommended. Students who have not taken Span 1004 (or equiv.) at the University of Minnesota must achieve a "high pass" on the LPE to enroll in Spanish 3015. This class is designed to further develop and strengthen the language skills acquired in the foundation courses. Rather than separating the internal disciplines inherent in second language study, this course seeks to integrate in a meaningful and "real world" fashion the student's ability to write, speak, read and understand modern Spanish at a level that is expected of majors and minors. Students will generate a series of creative and original compositions and will read a variety of texts from both Spain and Latin America. The class will employ diverse learning techniques -- grammar review, audio tape exercises, paired work, small group work, all class discussions, oral presentations, peer editing, process writing -- to provide students with the appropriate opportunities to enhance their language skills as they learn academic content through the active use of the Spanish language. This course requires a major time commitment on the part of each student registered.

**Style:** 25% Lecture, 50% Discussion. 15% peer editing, 10% preparing and presenting projects

**Grading:** 15% class participation, 5% participation in peer editing groups, 30% compositions and portfolio, 20% examinations, 10% reader's journal, 10% round-table discussion, 10% final research paper

**Exam Format:** Essays and short answers written in Spanish, together with grammar sections.

**SPAN 3021 Advanced Communication Skills**

4 credit(s); prereq 3015 credit will not be granted if credit received for: Tido 3021;

**Instructor:** STAFF

**Description:** Spanish 3021 is the second of the upper division sequence for majors or minors. Students who received an A or B in Spanish 3015 under the semester system and feel linguistically prepared, have the option to advance to the 31xx series in lieu of 3021; however, they may substitute it later for an elective course. While this class is designed to further develop and strengthen the language skills, it seeks to integrate in a meaningful and "real world" fashion the student's ability to write, speak, read and understand modern Spanish at a level that is expected of majors and minors. Students will write summaries of lectures given by native speakers, two papers and reader's journals. They will give an oral presentation and read a variety of texts. The class will employ diverse learning techniques -- grammar review, audio tape exercises, paired work, small group work, all-class discussions, peer editing, and process writing -- to provide students with the appropriate opportunities to enhance their language skills as they learn academic content through the active use of the Spanish language. This course requires a major time commitment on the part of each student registered.

**Style:** 25% Lecture, 50% Discussion. 15% peer editing, 10% preparing and presenting projects

**Grading:** 20% mid exam, 20% quizzes, 10% in-class presentation, 10% class participation, 15% compositions and portfolio, 10% paper, 10% reader's journal, 25% final paper

**Exam Format:** Essays and short answers written in Spanish, together with grammar sections.

**SPAN 3104W Introduction to the Study of Hispanic Literatures**

4 credit(s); prereq [3015 with grade of at least B-] or successful completion of 3021; Credit will not be granted if credit has been received for: TLD 3104; Meets CLE req of
Literature; meets CLE req of Writing Intensive;  
Instructor: STAFF  
Description: This course aims to introduce students to basic concepts of literary criticism and analysis through reading, discussing and writing about a variety of texts in Spanish. These will broadly represent a range of genres, periods, and styles. As this a writing-intensive course, it will include regular practice of composition and revision of written Spanish as a means of interpreting and responding to literary texts.

SPAN 3105W Introduction to the Study of Hispanic Cultures  
3 credit(s); prereq [3015 with grade of at least B-] or 3021;  
Meets CLE req of Writing Intensive;  
Instructor: STAFF  
Description: Student may contact the instructor or department for information.

SPAN 3107W Introduction to the Study of Hispanic Linguistics  
3 credit(s); prereq [3015 with grade of at least B-] or 3021;  
Credit will not be granted if credit has been received for:  
TLD0 3107; Meets CLE req of Writing Intensive;  
Instructor: STAFF  
Description: Student may contact the instructor or department for information.

SPAN 3211 Discourses of Imperial Spain, 1492-1800  
3 credit(s); prereq 3104; Credit will not be granted if credit has been received for:  
TLD0 3211;  
Instructor: Spadaccini,Nicholas  
Description: This course will consider some of the major literary-cultural texts from the early-modern period, especially the sixteenth and seventeenth centuries, also known as the Renaissance and Baroque periods. Presentations and discussions will cover a broad range of materials ranging from writing on the so-called “New World” to representations of issues and topics such as poverty, honor and lineage, history and fiction, love, marriage, subjectivity, and so on. These discussions will be organized around canonical texts such as Fernando de Rojas’ La Celestina; the anonymous Lazarillo de Tormes (which was probably written by an Erasmian humanist); sections of Cervantes’ Don Quijote, and other texts covering most genres. A detailed syllabus will be made available to students on the first day of classes.  
Style: 60% Lecture, 30% Discussion.  
(Oral presentation of a literary work in a round-table format)  
Grading: 30% mid exam, 30% final exam, 20% reports/papers, 10% in-class presentation, 10% class participation.  
Exam Format: Essays (textual analysis; discussion of literary issues and problematics) combined with short-answer definitions (i.e., genres, technical language), and identifications

SPAN 3510 Issues in Hispanic Cultures  
A-F only, 3 credit(s), max credits 9, 3 completions allowed;  
prereq 3105W credit will not be granted if credit received for:  
Tldo 3301, 3302, 3311, 3312, 3313, 3314, 3514, 3321, 3516, 3513, 3515, 3517;  
Instructor: STAFF  
Description: In this class we will explore aspects of medieval Iberian history and culture through the lens of several texts that may include, among others, El Cantar de Mio Cid, el romancero, el Libro de buen amor and Don Quijote. We will explore how aspects of medieval Iberian such as the Muslim presence, the coexistence of Jews, Muslims and Christians, as well as the relative strength of non-Castilian cultures on the Peninsula became factors in the emergence of what we think of as early modern Spain.

SPAN 3512 Modern Latin America  
A-F only, 3 credit(s); prereq 3105W;  
Instructor: Hanneman,Jaime Elizabeth  
Description: Student may contact the instructor or department for information.

SPAN 3701 Structure of Spanish: Phonology and Phonetics  
3 credit(s); prereq 3107; Credit will not be granted if credit has been received for:  
SPAN 3701H;  
Instructor: Face,Timothy L  
Description: This course aims to provide undergraduate students with an understanding of the basic concepts of phonetics and phonology and to teach them to apply these concepts to Spanish. The course will be both conceptual and practical. The practical component will involve the students using the concepts learned in class to improve their own pronunciation of Spanish. Students will acquire skills in recognizing, producing, transcribing and describing in linguistic terms the sounds of Spanish and in understanding and analyzing the Spanish sound system. The conceptual component will involve understanding the relationship between sounds in the Spanish phonological system and studying other factors (linguistic, social, etc.) that influence this system.  
Style: 50% Lecture, 30% Discussion. group activities  
Exam Format: mixed format

SPAN 3703 Origins and History of Spanish and Portuguese  
3 credit(s); prereq 3107 or instr consent;  
Instructor: Ocampo,Francisco Antonio  
Description: This course constitutes an introduction to the origins and history of the Spanish language. The focus of the course is modern Spanish and its relationship with Latin. Phonetic, morphologic, syntactic, lexical, and sociolinguistic aspects will be included. Intermediate stages of evolution will not be considered. Teaching methods include: lectures, group activities, problem solving assignments, discussion. Previous knowledge of Latin is not necessary. Course objectives: Give basic theoretical tools to make students understand language change; Give background knowledge about the history of Spanish; Improve the students’ own knowledge of the Spanish language; Inform about the linguistic rules that governed the series of changes from Latin to Spanish. Textbook: Resnick, Melvyn. Introduccion a la historia de la lengua espa?ola. Georgetown University Press, 1981.  
Style: 40% Lecture, 20% Discussion. Group work  
Grading: 30% mid exam, 30% final exam, 20% in-class presentation, 10% class participation, 10% problem solving.  
Exam Format: Essay

SPAN 3706 Spanish Applied Linguistics  
3 credit(s); prereq 3107;  
Instructor: Klee,Carol Anne  
Description: The objectives of this course are to introduce students to fundamental concepts in the field of applied linguistics and their application to the acquisition and teaching of Spanish as a second language. We will focus on aspects of Spanish second language acquisition that are particularly difficult for English speakers, examining empirical studies on the acquisition of the pronominal system, ser and estar, preterite and imperfect, subjunctive, and speech acts. This course will be of special interest to Spanish majors who intend to become Spanish language teachers.  
Style: 60% Lecture, 15% Discussion, 20% Small Group Activities, 5% Student Presentation  
Grading: 20% final exam, 15% reports/papers, 15% written homework, 40% additional semester exams, 5% in-class presentation, 5% class participation.

SPAN 3800 Film Studies in Spanish  
A-F only, 3 credit(s), max credits 9, 3 completions allowed;  
prereq 3104W or 3105W;  
Instructor: Forcinito,Ana  
Description: Student may contact the instructor or department for information.

SPAN 3910 Topics in Spanish Peninsular Literature  
A-F only, 3 credit(s), max credits 9, 3 completions allowed;  
prereq 3104;  
Instructor: Spadaccini,Nicholas  
Description: An exploration of Cervantes’ writing (his narrative and dramatic fiction), and the manner in which it engages tradition and authority. Readings include substantive parts of Don Quijote (approximately one half of parts I and II respectively) and three of his well-known plays: La Numancia, Pedro de Urdemalas, and El retablo de las maravillas (a one-act comic
interlude or entremes). General topics for discussion include Cervantes and the novel; Cervantes? critique of the popular mass?-oriented comedia of the early 1600s, and his dialogue with major social and political discourses of early modern Spain, with special emphasis on the question of ?otherness?. The course also incorporates a brief list of theoretical/critical essays, which will help us understand why Cervantes? experimental fiction has engaged succeeding generations of readers. Format: Brief formal presentations from instructor followed by analysis and discussion. Required Reading: -- Don Quijote de la mancha, 2 vols. Ed. Tom Lathrop. Newark, Delaware; Juan de la Cuesta, 1998. (A Don Quijote ?Dictionary? compiled by the same editor is also available. This reasonably priced edition has been prepared and annotated with American undergraduates in mind. -- Annotated editions (with good introductions) of Numancia, Pedro de Urdemalas, and ?El Retablo de las maravillas.? -- Introductions to above-mentioned editions, plus 5-6 critical/theoretical essays selected by the instructor. Grading: 30%-Reading of assignments, participation in class discussions, & brief oral presentation & a five-page paper of presentation 30%-A mid-semester take-home examination 40%-A take-home final examination Each essay should be five pages

SPAN 3920 Topics in Spanish-American Literature A-F only, 3 credit(s), max credits 9, 3 completions allowed; prereq 3104; Credit will not be granted if credit has been received for: SPAN 3920H; Instructor: STAFF
Description: SPANISH 3920: Detective Narrative and the genero negro/Novel noir in the USA, Latin America and Spain This course critically examines a genre that has both resided on and represented the margins of Spanish and Latin American societies, and its transformation in recent years into a mainstream and highly exportable transatlantic cultural phenomenon. Although the so-called noir narrative has a long tradition in Spain and Latin American literatures, the influences of Francisco Franco?s regime as well as those of his across the Atlantic counterparts, and their concurrent air of corruption, censorship, and oppression spurred a new period in the genre?s formation. Through the second half of the 20th century, as those transatlantic communities transitioned from dictactorships to nominal democracies, the crime and detective narrative became a manifestation of Spanish society?s struggles with social and political chaos. This course will begin with comments on early noir short narrative from United States (Raymond Chandler), Spain (Mendoza), and Latin American sources (Roncagliolo, Subcomandante Marcos) and move on to contemporary narrative examples from both continents (Martinez, Lopez Coll) in order to convey the growth and unique nature of the Spanish genero negro during and after the above mentioned dictatorships, as well as in present-day popular novels and short story. The basis of the course is the reading, interpretation, and analysis in Spanish of a variety of texts in the context of notions of genre, history, cultural context, and literary conventions. Class time will be highly participatory, in the form of full-class and small-group discussions as well as individual presentations, although the professor will occasionally lecture on historical and cultural context as a means to orient the class. In this way, the participation grade will be based on the students? expected involvement and engagement in these classroom discussions, including not only class discussions (Q's and A's), but also challenging oral presentations, both scheduled across the semester. Texts Chandler, Raymond. El largo adios. Novela. Edicion Catedra, 2005. Mendoza, Eduardo. El misterio de la cripta embrujada. Novela. Edicion 1989. Martinez, Fernando. Crimenes contados: Antologia del relato negro espa?ol. Edicion 2006. Subcomandante Marcos / Taibo. Muertos incompodos. Novela. Edicion 2005. Roncagliolo, Santiago. Abril rojo. Novela. Edicion 2007. Lopez Coll, Lucia. Versiones en negro: relatos policiales iberoamericanos. Edicion 2003. Grading: 30% mid exam, 40% reports/papers, 15% in-class presentation, 15% class participation.

SPAN 3970 Directed Studies 1-4 credit(s), max credits 9, 3 completions allowed; prereq instr consent, dept consent, college consent credit will not be granted if credit received for: Tido 3303, Tido 3315, Tido 3503, Tido 3870, Tido 3217; Instructor: STAFF
Description: Guided individual reading or study. Consult with the Undergraduate Advisor: Margaret Demmessie.

SPAN 3972W Graduation Seminar A-F only, 3 credit(s); prereq 31 cr of 3xxx, instr consent; Credit will not be granted if credit has been received for: SPAN 3972V; Meets CLE reg of Writing Intensive; Instructor: Ferran, Ofelia
Description: Student may contact the instructor or department for information.

SPAN 3972W Graduation Seminar A-F only, 3 credit(s); prereq 31 cr of 3xxx, instr consent; Credit will not be granted if credit has been received for: SPAN 3972V; Meets CLE reg of Writing Intensive; Instructor: Ramos-Garcia, Luis A
Description: Student may contact the instructor or department for information.

SPAN 4004 Intermediate Spanish 2 credit(s); prereq Grad student; Instructor: Manzoni, Carla
Description: Student may contact the instructor or department for information.

SPAN 5106 The Literature of the Reconquest and Feudal Spain 3 credit(s); prereq three 3xxx or 5xxx literature courses in Spanish; Instructor: STAFF
Description: Topic: Conquest & Trauma in Iberian Literature and Culture This class explores through literary and historical texts how conquest and trauma have defined Iberian Medieval Studies. The class, like the Iberian Middle Ages, will be framed by readings that represent and question the two dates that have traditionally been used to demarcate the Spanish Middle Ages, 711 and 1492. In the first part of the class we will focus on historical and literary accounts of the arrival of Muslims to the Peninsula (including Arab and Alfonsine histories, romances and Pedro de Corral?s Cronica Sarracina). We will read these texts through the lens of recent theoretical work that explores modes of representation for violence and trauma (incl. Cathy Caruth). The Spanish epic, the Cantar de Mio Cid will serve as an intermediary reading that connects (or disconnects) discussions of trauma and invasion with those of conquest and memory, which will be the dominant themes of the second half of the class. During the final weeks we will engage with texts written by and about 1492 as a date of rupture marking the expulsion of non-Christian subjects (Muslims and Jews) from Spain. Fifteenth- and sixteenth-century texts written by moriscos and Sephardic Jews in diaspora (including Arabic and cancionero poetry and the history of Eliyahu Capsali) that discuss the Expulsion, as well as modern studies of it (including those of Elizabeth Perry, H.P. Harvey, Gil Andijar) will be central in our discussion of memory and trauma.

SPAN 5526 Colonial Discourse in Spanish American Writing 3 credit(s); prereq Three 3xxx or 5xxx literature courses in Spanish; Instructor: STAFF
Description: Using an interdisciplinary approach to achieve a better understanding of this multidimensional social conflict, the course examines the role of colonial discourse as producer of the epistemic colonial difference, and explores the legacies of colonialism. Students will be expected to focus on and to think about the organizational mechanisms through which aural and visual practices mediate reality in Colonial Latin America. Students will learn to be critical readers by considering how cultural texts may be historically determined and by exploring how individuals may shape a particular cultural theme in a variety of manners. It will focus on critical readings and discussion of cultural artifacts, texts and documents of Colonial Latin America, including material pertaining to the aural and...
visual production of the period, European and indigenous accounts of the conquest, as well as indigenous, African, criollo, mestizo and women writings during the colony. Concentration will center on the textual strategies, topics, world views, motivations, projects and expectations explicit or implicit in the texts, their signifcance at the time, and their importance for understanding the formation of what we know as Latin America today. The course also is devoted to the conquest of Latin America by analyzing the role of colonial discourse and the legacies of colonialism in the region. Students will deal with different theoretical approaches deriving from the humanities and the social sciences.

Style: All coursework, with the exception of certain supplementary readings, will be in Spanish.

SPAN 5711 The Structure of Modern Spanish: Phonology
3 credit(s); prereq 3701, two 3xxx or 5xxx linguistics courses in Spanish or instr consent
Instructor: Face, Timothy L
Description: This course provides an investigation of the Spanish sound system and considers some of the major topics in Spanish phonology from theoretical and experimental perspectives. We will review the traditional articulatory descriptions of Spanish sounds, learn the basics of the acoustic nature of these sounds, and see how these form the basis for the building blocks of modern phonological theory. We will survey the major phonological theories that have been used and also consider the ways in which experimentation can expand upon these theoretical approaches. Coursework will consist of two exams, occasional homework assignments, and an annotated bibliography dealing with an area of Spanish phonology of the student's choosing.
Exam Format: Essay, problem solving

SPAN 5716 Structure of Modern Spanish: Pragmatics
3 credit(s);
Instructor: Ocampo, Francisco Antonio
Description: This course constitutes an introduction to the field of pragmatics. The main topics of the discipline are discussed: deixis, conversational implicature, presupposition, speech acts and conversational analysis. The target audience is graduate students.
Style: 60% Lecture, 40% Discussion.
Grading: 30% mid exam, 30% final exam, 40% problem solving.
Exam Format: Essay

SPAN 5970 Directed Readings
1-4 credit(s), max credits 9, 9 completions allowed; prereq MA or Ph.D candidate, instr consent, dept consent, college consent
Instructor: STAFF
Description:

SPAN 5990 Directed Research
1-4 credit(s), max credits 9, 9 completions allowed; prereq instr consent, dept consent, college consent
Instructor: O'Connell, Joanna
Description: Student may contact the instructor or department for information.

SPAN 5990 Directed Research
1-4 credit(s), max credits 9, 9 completions allowed; prereq instr consent, dept consent, college consent
Instructor: Ferran, Ofelia
Description: Student may contact the instructor or department for information.

SPAN 5990 Directed Research
1-4 credit(s), max credits 9, 9 completions allowed; prereq instr consent, dept consent, college consent
Instructor: Ocampo, Francisco Antonio
Description: Student may contact the instructor or department for information.

SPAN 5990 Directed Research
1-4 credit(s), max credits 9, 9 completions allowed; prereq
Instructor: Spadaccini, Nicholas
Description: Student may contact the instructor or department for information.

SPAN 5990 Directed Research
1-4 credit(s), max credits 9, 9 completions allowed; prereq instr consent, dept consent, college consent
Instructor: Klee, Carol Anne
Description: Student may contact the instructor or department for information.

SPAN 5990 Directed Research
1-4 credit(s), max credits 9, 9 completions allowed; prereq instr consent, dept consent, college consent
Instructor: Ramos-Garcia, Luis A
Description: Student may contact the instructor or department for information.

SPAN 5990 Directed Research
1-4 credit(s), max credits 9, 9 completions allowed; prereq instr consent, dept consent, college consent
Instructor: Ferran, Ofelia
Description: Student may contact the instructor or department for information.

SPAN 5990 Directed Research
1-4 credit(s), max credits 9, 9 completions allowed; prereq instr consent, dept consent, college consent
Instructor: Face, Timothy L
Description: Student may contact the instructor or department for information.

SPAN 5990 Directed Research
1-4 credit(s), max credits 9, 9 completions allowed; prereq instr consent, dept consent, college consent
Instructor: Marrero-Fente, Raul A
Description: Student may contact the instructor or department for information.

SPAN 5990 Directed Research
1-4 credit(s), max credits 9, 9 completions allowed; prereq instr consent, dept consent, college consent
Instructor: Hamilton, Michelle Marie
Description: Student may contact the instructor or department for information.

Speech-Language-Hearing Sciences
115 Shevlin Hall

SLHS 1301W The Physics and Biology of Spoken Language
4 credit(s); Meets CLE req of Physical Sciences; meets CLE req of Writing Intensive
Instructor: STAFF
Description: Introduction to the physics and biology of spoken language; the talker's production of sounds and words; transmission of sound; the listener's perception of what was heard; and computer analysis and synthesis of speech. Lectures will be supported by computer animations that show, in slow motion, rapidly changing dynamic events in acoustics, by on-line computer analysis of speech, and by laboratory sessions. Objectives: 1) Provide students who have a limited physics and biology background with an introduction to the physics and biology of spoken language, a field that is not only interesting,
SLHS 1301W The Physics and Biology of Spoken Language
4 credit(s); Meets CLE req of Physical Sciences; meets CLE req of Writing Intensive;
Instructor: Zhang,Yang
Description: This 4-credit introductory course covers a wide range of interesting topics on spoken language and human communication with no prerequisites. These topics include historical perspectives and current research on speech production, animal communication systems, speech and musical acoustics, speech perception, speech development, cross-language comparisons, techniques used in speech analysis, machine recognition of speech, brain imaging techniques, speech evolution, and implications for language-impaired populations. The trek through the history of speech technology will begin with Kratzenstein, who designed the first speech synthesizer in 1179, and end with an examination of the ways in which current research from disciplines such as physics, biology, psychology, linguistics, speech and hearing science, and so forth contributes to our understanding of the physics and biology of spoken language. Lectures will be supported by computer animations and online videos that show, in slow motion, rapidly changing dynamic events in the articulatory system, the auditory system, and the brain. Hands-on laboratory sessions are led by experienced teaching assistants in the graduate program of the speech-language-hearing sciences. Most course materials, including answers to study guides and practice tests are available online through the WebVista system of the university. After completing this course, students should be able to 1) Analyze and identify basic acoustic features of speech, music, or other sounds. 2) Demonstrate knowledge about the relationship between the physical speech signal, the physiological activities that make the sound (production), and the psychological response to the signal (perception). 3) Demonstrate understanding of the complex nature of speech and language. 4) Show that they understand the basics of the development of speech and language, modern speech technology, and modern techniques of studying human information processing. 5) Work together as a team for lab projects and learn through empirical work. Course features: - Meets CLE req of Physical Science/Lab Core - Meets CLE req of Writing Intensive - No prerequisite required - Offered in Fall and Spring semesters
Style: 60% Lecture, 5% Film/Video, 20% Discussion, 5% Laboratory, 5% Small Group Activities, 5% Demonstration.
Grading: 50% mid exam, 25% final exam, 5% quizzes, 20% laboratory evaluation.
Exam Format: Multiple choice
SLHS 1401 Communication Differences and Disorders
3 credit(s); Credit will not be granted if credit has been received for: SLHS 1401; Meets CLE req of Social Sciences;
Instructor: STAFF
Description: Human communication is a complex interpersonal process that involves speech, language, and hearing. These three aspects of communication are made up of neurological, cognitive, sensory, anatomical, and physiological components, which come together and develop within social contexts. Functional communication skills are necessary to successfully participate in all aspects of society and any breakdown in speech, language or hearing will have an impact on one’s daily life-at home, school, work, and/or community settings. In order to determine if a communication disorder exists, we need to have a clear understanding of what constitutes “normal” communication. The definition of what is normal or acceptable speech, language, and hearing behavior may vary according to age, gender, language or dialectal background, and culture. Thus, these factors must be considered when identifying and treating communication disorders. This course will survey a range of communication disorders affecting children and adults, and will explore the origin, assessment, and treatment of these disorders within the context of normal human variation. Reference to the professional fields of speech-language pathology and audiology will be given throughout the semester.

SLHS 3302 Anatomy and Physiology of the Speech and Hearing Mechanisms
3 credit(s);
Instructor: STAFF
Description: Student may contact the instructor or department for information.

SLHS 3305W Speech Science
3 credit(s); Meets CLE req of Writing Intensive;
Instructor: Sasisekharan, Jayanthi
Description: Student may contact the instructor or department for information.

SLHS 3401 Communication Differences and Disorders
3 credit(s); Credit will not be granted if credit has been received for: SLHS 1401; Meets CLE req of Social Sciences;
Instructor: STAFF
Description: Human communication is a complex interpersonal process that involves speech, language, and hearing. These three aspects of communication are made up of neurological, cognitive, sensory, anatomical, and physiological components, which come together and develop within social contexts. Functional communication skills are necessary to successfully participate in all aspects of society and any breakdown in speech, language or hearing will have an impact on one’s daily life-at home, school, work, and/or community settings. In order to determine if a communication disorder exists, we need to have a clear understanding of what constitutes “normal” communication. The definition of what is normal or acceptable speech, language, and hearing behavior may vary according to age, gender, language or dialectal background, and culture. Thus, these factors must be considered when identifying and treating communication disorders. This course will survey a range of communication disorders affecting children and adults, and will explore the origin, assessment, and treatment of these disorders within the context of normal human variation. Reference to the professional fields of speech-language pathology and audiology will be given throughout the semester.

SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms];
Instructor: Carney,Arlene Earley
Description: Student may contact the instructor or department for information.

SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms];
Instructor: Angerman,Sarah Kay
Description: Student may contact the instructor or department for information.

SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms];
Instructor: Derulter,Mark
Description: Student may contact the instructor or department for information.
SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms]; instructor: Finestack, Lizbeth Haller
description: Student may contact the instructor or department for information.

SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms]; instructor: Reichle, Joe E
description: Student may contact the instructor or department for information.

SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms]; instructor: Kennedy, Mary R T
description: Student may contact the instructor or department for information.

SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms]; instructor: Nelson, Peggy B
description: Student may contact the instructor or department for information.

SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms]; instructor: Kohner, Kathryn
description: Student may contact the instructor or department for information.

SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms]; instructor: Munson, Benjamin
description: Student may contact the instructor or department for information.

SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms]; instructor: Watson, Peter J
description: Student may contact the instructor or department for information.

SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms]; instructor: Zhang, Yang
description: Student may contact the instructor or department for information.

SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms]; instructor: Rao, Apama
description: Student may contact the instructor or department for information.

SLHS 3555H Honors Thesis
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prerequisite See dir of undergrad studies for [thesis adviser, forms]; instructor: Sasisekaran, Jayanthi
description: Student may contact the instructor or department for information.

SLHS 3994 Directed Research
1-12 credit(s), max credits 24; prerequisite Undergrad doing research; instructor: Carney, Arlene Earley
description: Student may contact the instructor or department for information.

SLHS 3994 Directed Research
1-12 credit(s), max credits 24; prerequisite Undergrad doing research; instructor: Angerman, Sarah Kay
description: Student may contact the instructor or department for information.

SLHS 3994 Directed Research
1-12 credit(s), max credits 24; prerequisite Undergrad doing research; instructor: Deruiter, Mark
description: Student may contact the instructor or department for information.

SLHS 3994 Directed Research
1-12 credit(s), max credits 24; prerequisite Undergrad doing research; instructor: Schlauch, Robert S
description: Student may contact the instructor or department for information.

SLHS 3994 Directed Research
1-12 credit(s), max credits 24; prerequisite Undergrad doing research; instructor: Windsor, Jennifer
description: Student may contact the instructor or department for information.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
SLHS 3994 Directed Research  
1-12 credit(s), max credits 24; prereq Undergrad doing research;  
Instructor: Kohnert,Kathryn  
Description: Student may contact the instructor or department for information.

SLHS 3994 Directed Research  
1-12 credit(s), max credits 24; prereq Undergrad doing research;  
Instructor: Munson,Benjamin  
Description: Student may contact the instructor or department for information.

SLHS 3994 Directed Research  
1-12 credit(s), max credits 24; prereq Undergrad doing research;  
Instructor: Watson,Peter J  
Description: Student may contact the instructor or department for information.

SLHS 3994 Directed Research  
1-12 credit(s), max credits 24; prereq Undergrad doing research;  
Instructor: Zhang,Yang  
Description: Student may contact the instructor or department for information.

SLHS 3994 Directed Research  
1-12 credit(s), max credits 24; prereq Undergrad doing research;  
Instructor: Rao,Aparna  
Description: Student may contact the instructor or department for information.

SLHS 3994 Directed Research  
1-12 credit(s), max credits 24; prereq Undergrad doing research;  
Instructor: Sasisekaran, Jayanthi  
Description: Student may contact the instructor or department for information.

SLHS 4301 Introduction to the Neuroscience of Human Communication  
3 credit(s);  
Instructor: Kennedy, Mary R T  
Description: This course is intended to provide students with an overview of neuroanatomy, neurophysiology, and neuroscience pertinent to processes of human communication behavior. Although it is intended for students who are majoring in Speech-Language-Hearing Sciences, students with some science background are welcome to enroll. Emphasis is on structural and functional relationships necessary for speech, language and hearing, although a general knowledge of the nervous system is first required. Topics include: gross anatomy of central and peripheral nervous systems; basic principles of neuroscience; neural embryological development; neuroplasticity; motor and sensory systems; visual and auditory systems; and hemisphere and cortical organization. An overview of current diagnostic techniques and examples of clinical neuropathologies that result in communication disorders are also introduced.  
Style: 70% Lecture, 10% Discussion, 20% Laboratory.  
Grading: 20% mid exam, 25% final exam, 25% quizzes, 10% laboratory evaluation, 20% other evaluation. 2nd midterm exam  
Exam Format: multiple choice, T/F, short essay, labeling, fill-in-blank

SLHS 4302 Assessment and Treatment in Speech-Language Pathology  
A-F only, 3 credit(s); prereq [[1401 or 3401], 3302, 3303, 3304, [4301 or Concurrent registration is required (or allowed) in 4301]] or grad student or instr consent credit will not be granted if credit already received for: SLHS 5402;  
Instructor: Finestack, Lizbeth Haller  
Description: Student may contact the instructor or department for information.

SLHS 4602 Communication and Problem Behavior  
3 credit(s);  
Instructor: Reihele, Joe E  
Description: This course will describe the environmental bases of problem behavior that young children use to influence the behavior of others. We will examine possible causes of problem behavior, practical assessment strategies to determine variables associated with problem behavior, and a range of practical approaches to prevent and provide young children with more socially acceptable alternatives to problem behavior. This course is designed for anyone who is a parent of a young child or whose career will result in interactions with young children. At the completion of this course, participants should be: 1. familiar with theories addressing the emergence of problem behavior. 2. familiar with the implications that children with problem behavior have on society. 3. familiar with the range of academic and social problems among children who experience significant behavior disorders. 4. familiar with cultural differences in defining and treating children who have behavior problems. 5. familiar with the range of assessment strategies that may be used to determine the social functions that may be maintaining problem behavior. 6. able to interpret results of a variety of assessment strategies. 7. familiar with a variety of intervention strategies designed to reduce or prevent repertoires of socially motivated problem behavior.  
Style: 50% Lecture, 30% Discussion. CD Rom interactive activities  
Grading: 30% mid exam, 30% final exam, 30% special projects, 10% class participation.  
Exam Format: Take home- short answer

SLHS 4801 Hearing Measurement and Disorders  
3 credit(s); prereq [3302, 3305W] or instr consent;  
Instructor: STAFF  
Description: This course will provide a basic orientation to audiolologic assessment and disorders of the auditory system. The course is geared towards undergraduate students majoring in Speech-Language-Hearing Sciences. The anatomy of the ear and the scope of practice in audiology will be reviewed. Emphasis will be placed on the tests used to assess hearing, including pure-tone audiometry and masking, speech audiometry, immittance, electrophysiological tests, pure-tone screening, and pediatric assessment. Various disorders of the outer, middle, and inner ear will be described. Case management for clients with hearing loss will also be discussed. Students will obtain hands-on experience with otoscopic examination, pure tone audiometry, tympanometry, and hearing screening.  
Style: 80% Lecture, 10% Discussion. in-class activities  
Grading: 50% mid exam, 30% final exam, 10% quizzes, 10% laboratory evaluation.  
Exam Format: Multiple choice, completion, and short answer questions

SLHS 5401 Counseling and Professional Issues  
3 credit(s); prereq [[concurrent enrollment 8720 or concurrent enrollment 8820], grad student] recommended;  
Instructor: Deruiter, Mark  
Description: Basic counseling principles and current professional issues in communication disorders. Application of counseling theory to clinical practice. Analysis of regulation, practice, and future direction of communication disorders.  
Style: 80% Lecture, 20% Discussion.  
Grading: 40% reports/papers, 40% quizzes, 20% problem
solving.

Exam Format: Multiple choice/short essay

SLHS 5501 Fluency and Phonological Disorders
3 credit(s); prereq Grad student or instr consent;
Instructor: Sasisekaran, Jayanthi
Description: This course discusses the nature, assessment, and treatment of (a) phonological disorders in children (including articulation disorders and childhood apraxia of speech), and (b) fluency disorders in children and adults. At the conclusion of the course, students will be able to conduct supervised assessment and treatment of phonological disorders in children, and supervised assessment and treatment of fluency disorders in children and adults. This course is primarily concerned with functional disorders, i.e., phonological and fluency disorders of an unknown etiology. Disorders with a known organic etiology (e.g., hearing impairment, neuromotor dysfunction, craniofacial anomaly, neurogenic stuttering) will be mentioned briefly, and will be covered in more depth in other courses. Course Objectives. At the conclusion of this course, students will be able to: (1) Describe the normal development of fluency and phonology (2) Describe atypical phonological development (3) Describe the speech of people with fluency disorders (4) Administer and interpret assessments of phonology in children (5) Administer and interpret assessments of fluency in children and adults (6) Select treatment goals and behavioral objectives for children with phonological disorders (7) Select treatment goals and behavioral objectives for children and adults with fluency disorders (8) Develop therapy materials to implement treatment goals and objectives
Style: 70% Lecture, 30% Small Group Activities.
Grading: 50% mid exam, 25% final exam, 25% reports/papers.

SLHS 5603 Language and Cognitive Disorders in Children
3 credit(s); prereq 3303 or CDIs 3303 or equiv or grad student or instr consent;
Instructor: Finestack, Lizbeth Haller
Description: Student may contact the instructor or department for information.

SLHS 5801 Audiologic Assessment I
3 credit(s); prereq 4801 or CDIs 4801 or instr consent;
Instructor: Angerman, Sarah Kay
Description: Student may contact the instructor or department for information.

SLHS 5802 Hearing Aids I
3 credit(s); prereq [3305, 4801] or [CDIs 3305, CDIs 4801] or instr consent;
Instructor: Gregan, Melanie J
Description: Student may contact the instructor or department for information.

SLHS 5803 Hearing Loss in Children: Diagnosis
3 credit(s); prereq 4801 or CDIs 4801 or instr consent;
Instructor: Rao, Aparna
Description: This course will focus on the diagnosis of auditory disorders in infants and children. Topics covered will include embryologic and physiologic development of the auditory system, genetics of hearing loss and non-genetic causes of hearing loss. Students will learn about hearing testing using behavioral and physiological measures. Newborn hearing screening will be discussed as well.
Style: 50% Lecture, 10% Film/Video, 10% Discussion, 15% Small Group Activities, 15% Demonstration.
Grading: 25% mid exam, 25% final exam, 30% special projects, 10% quizzes, 10% in-class presentation.

SLHS 5810 Laboratory Module in Audiology
1-2 credit(s), max credits 5, 5 completions allowed; prereq 4801 or CDIs 4801 or instr consent;
Instructor: Gregan, Melanie J
Description: Student may contact the instructor or department for information.

SLHS 5820 Clinical Research and Practice: Grand Rounds
S-N only, 1-6 credit(s), max credits 6, 6 completions allowed; prereq 4801 or CDIs 4801 or equiv or instr consent;
Instructor: Schlauch, Robert S
Description: Student may contact the instructor or department for information.

SLHS 5830 Clinical Foundations in Audiology
S-N only, 1-8 credit(s), max credits 24, 24 completions allowed; prereq Grad SLHS major;
Instructor: Deruiter, Mark
Description: Student may contact the instructor or department for information.

SLHS 5993 Directed Study
1-12 credit(s), max credits 18, 18 completions allowed; prereq instr consent;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

SLHS 8430 Proseminar in Speech-Language-Hearing Sciences
S-N only, 1 credit(s), max credits 10, 10 completions allowed; prereq intended for students in Department of Speech-Language-Hearing Sciences;
Instructor: Nelson, Peggy B
Description: Student may contact the instructor or department for information.

SLHS 8720 Clinical Education in Speech-Language Pathology
S-N only, 1-8 credit(s), max credits 24, 24 completions allowed; prereq Grad CDIs major, adviser, DGS consent;
Instructor: Deruiter, Mark
Description: Student may contact the instructor or department for information.

SLHS 8820 Clinical Education in Audiology
S-N only, 1-8 credit(s), max credits 24, 24 completions allowed; prereq Grad CDIs major;
Instructor: Deruiter, Mark
Description: Student may contact the instructor or department for information.

SLHS 8840 Audiology Externship
S-N only, 1-7 credit(s), max credits 7, 3 completions allowed; prereq [8802, 8807] or [CDIs 8802, CDIs 8807];
Instructor: Deruiter, Mark
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed; prereq instr consent;
Instructor: Carney, Arlene Earley
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed; prereq instr consent;
Instructor: Angerman, Sarah Kay
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed; prereq Grad SLHS major, adviser, DGS consent;
Instructor: Deruiter, Mark
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed; prereq Grad CDIs major, adviser, DGS consent;
Instructor: Deruiter, Mark
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed; prereq Grad SLHS major, adviser, DGS consent;
Instructor: Deruiter, Mark
Description: Student may contact the instructor or department for information.
for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed;
prereq instr consent;
Instructor: Schlauk, Robert S
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed;
prereq instr consent;
Instructor: Winds, Jennifer
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed;
prereq instr consent;
Instructor: Reichle, Joe E
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed;
prereq instr consent;
Instructor: Kennedy, Mary R T
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed;
prereq instr consent;
Instructor: Nelson, Peggy B
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed;
prereq instr consent;
Instructor: Kohrnt, Kathryn
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed;
prereq instr consent;
Instructor: Munson, Benjamin
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed;
prereq instr consent;
Instructor: Watson, Peter J
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed;
prereq instr consent;
Instructor: Zhang, Yang
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed;
prereq instr consent;
Instructor: Rao, Aparna
Description: Student may contact the instructor or department for information.

SLHS 8994 Directed Research
1-12 credit(s), max credits 18, 18 completions allowed;
prereq instr consent;
Instructor: Sasiskearan, Jayanthi
Description: Student may contact the instructor or department for information.

**Sport Management**

220 Cooke Hall

SMGT 1701 Introduction to Sport Management
A-F only, 2 credit(s);
Instructor: Richardson, Tiffany
Description: Scope/motive of the study of sport from sociological, psychological, historical, economic, and scientific perspective. Issues in sport.

SMGT 1701 Introduction to Sport Management
A-F only, 2 credit(s);
Instructor: Shreffler, Megan Beth
Description: Student may contact the instructor or department for information.

SMGT 1905 Freshman Seminar
OPT No Aud, 1-3 credit(s), max credits 6; prereq Fr;
Instructor: Allison JD, Rayla
Description: Interdisciplinary seminar. Topics specified in Class Schedule.

SMGT 3111 Sports Facility and Event Management
A-F only, 3 credit(s); prereq SMGT major or instr consent;
Instructor: Richardson, Tiffany
Description: Aspects of managing sport facilities/events. Conceptualization of sports events. Event management planning process, budgeting, site selection, booking, ticketing, sponsorship.

SMGT 3143 Organization and Management of Sport
A-F only, 3 credit(s); prereq SMGT major;
Instructor: Houghton, Emily Jane
Description: Designed to focus on the principles, policies, and procedures involved in the administration and management of sports programs at the interscholastic and collegiate levels.

SMGT 3421 Business of Sport
A-F only, 3 credit(s); prereq SMGT or kin or rec major or instr consent;
Instructor: Gaddey Jr, Roy Arthur

SMGT 3501 Sport in a Diverse Society
A-F only, 3 credit(s); Meets CLE req of Diversity and Soc Justice US; meets CLE req of Social Sciences;
Instructor: STAFF
Description: Relationship between sport and contemporary social institutions (politics, religion, economics, education, mass media). Emphasizes groups/individuals who have historically been marginalized or excluded from sport participation. Variables such as race, sex, social class, sexual orientation, physical (dis)abilities also emphasized.

SMGT 3601 Ethics and Values in Sport
A-F only, 2 credit(s); prereq SMGT major;
Instructor: Schull, Vicki Denise
Description: Violence, demonstrative behavior, sportsmanship. Ethical issues in playing of sport and in management/governance of sport industry.

SMGT 3631 Sport Marketing
A-F only, 3 credit(s); prereq SMGT major or instr consent;
Instructor: Brownlee, Eric A
Description: Fundamental theories/issues in sport marketing,
SMGT 3632 Sport Sales and Fund-raising  
A-F only, 3 credit(s); prereq Sport Management major or instr consent;  
Instructor: Brownlee, Eric A  
Description: Foundation of revenue production in sport management. Necessary skills related to revenue production and sales processes as they apply to the business of sport.

SMGT 3861 Legal Aspects of Sport  
A-F only, 3 credit(s); prereq SMGT major or instr consent;  
Instructor: Allison JD, Rayla  
Description: U.S. legal system, its structure/terminology. Sport legal aspects of contract law, statutory law, constitutional law, intellectual property, negligence, risk management. Managerial analysis, decision making.

SMGT 3881W Senior Seminar in Sport Management  
A-F only, 3 credit(s); prereq SMGT major, completion of major coursework, instr consent; Meets CLE req of Writing Intensive;  
Instructor: Kihl, Lisa A  
Description: Presentations/discussions on sport-related topics of interest.

SMGT 3993 Directed Study in Sport Management  
A-F only, 1-3 credit(s), max credits 3, 3 completions allowed; prereq Undergrad, instr consent;  
Instructor: Buyssse, Jo Ann  
Description: Students work with faculty and grad students on research, scholarly, or creative activities. Students assist with faculty scholarship or carry out projects under faculty supervision.

STAT 1001 Introduction to the Ideas of Statistics  
4 credit(s); prereq Mathematics requirement for admission to University; Meets CLE req of Mathematical Thinking;  
Instructor: STAFF  
Description: Introduction to the Ideas of Statistics is a course that teaches the basic ideas of statistics without getting bogged down in equations, Greek letters, and complicated calculations. Conceptual issues, which make the difference between valid and bogus uses of statistics, are faced squarely and not "dumbed down" but the mathematics is kept simple and explained in plain English, graphs, and diagrams. Topics covered are design of polls and sample surveys, and the use of data as evidence in testing and plausibility of claims made about populations.

SMGT 3996 Practicum: The Sport Experience  
S-N only, 2-8 credit(s), max credits 8, 4 completions allowed; prereq 3881, SMGT major, instr consent;  
Instructor: Buyssse, Jo Ann  
Description: This is an experiential learning course where students learn and work in a professional organization outside of the classroom. This course is designed for Sport Studies majors only. It is their final core course. It is similar to an internship, with the exception that practicum credits may be divided between two semesters and also between two sites.

SMGT 3993 Directed Study in Sport Management  
A-F only, 1-3 credit(s), max credits 3, 3 completions allowed; prereq Undergrad, instr consent;  
Instructor: Buyssse, Jo Ann  
Description: Students work with faculty and grad students on research, scholarly, or creative activities. Students assist with faculty scholarship or carry out projects under faculty supervision.

SMGT 3993 Directed Study in Sport Management  
A-F only, 1-3 credit(s), max credits 3, 3 completions allowed; prereq Undergrad, instr consent;  
Instructor: Brownlee, Eric A  
Description: Students work with faculty and grad students on research, scholarly, or creative activities. Students assist with faculty scholarship or carry out projects under faculty supervision.
undergraduates.

Exam Format: problem solving

STAT 3021 Introduction to Probability and Statistics
3 credit(s); prereq Math 1272; Instructor: STAFF
Description: This course will start with an introduction of probability, including interpretations of probability, axioms of probability, and the use of counting methods for solving probability problems, conditional probability, Bayes theorem, independence, random variables and distributions, expected values, the binomial, Poisson, normal and other distributions, the law of large numbers, and the central limit theorem. Then we will cover applications of the above to the theory of statistical inference, including estimation, confidence intervals, and hypothesis tests.

Style: 100% Lecture.
Grading: 45% final exam, 45% final exam, 10% problem solving.
Exam Format: Problem solving

STAT 3022 Data Analysis
4 credit(s); prereq 3011 or 3021; Instructor: STAFF
Description: Further topics in regression and ANOVA; non-parametric methods; model selection and verification; writing statistical reports; use of statistical software; additional selected topics.

Exam Format: Problem solving

STAT 4893W Senior Paper
1 credit(s); prereq Stat major; Meets CLE req of Writing Intensive; Instructor: STAFF
Description: STAT 4893W is a requirement for a BA in Statistics in CLA. It also fulfills the University requirement of a Writing Intensive course in the major. It can be satisfied in several ways including but not limited to directed study culminating in a paper on a specialized area of Statistics (most common choice), carrying out a "case study" involving data collection and analysis and a report, and writing and documenting a computer program to implement a nontrivial statistical technique. Students should enroll in any semester of their Senior year. If work is unfinished at semester end (as frequently happens), an incomplete (I) is usually granted. The topic of the paper should be chosen in consultation with a Statistics faculty supervisor. Frequently this faculty member will be the student's instructor in STAT 5xxx, and the paper will build from the course. See http://www.stat.umn.edu/ugrad/stat4893.html for more information.

Grading: 100% reports/papers.

STAT 5021 Statistical Analysis
4 credit(s); prereq credit will not be granted if credit received for: 3011; College algebra or instr consent; Stat course recommended; Credit will not be granted if credit has been received for: STAT 3011; Instructor: STAFF
Description: The primary audience for this course is graduate students in non-statistics major programs who need statistical competence. Typical needs would be the analysis of data using common statistical methods, the design of single-factor experiments and the ability to read journal articles and assess their statistical content critically. After completion of the course, students are able to carry out one-and-two sample tests, set up confidence intervals for means, proportions and differences in means and proportions. They can fit single-predictor regressions and one-way analysis of variance, along with checks of the model assumptions underlying theses methods. The course includes a brief non-calculus introduction to probability theory and statistical distributions.

Style: 50% Lecture, 25% Discussion, 25% Laboratory.

STAT 5101 Theory of Statistics I
4 credit(s); prereq MATH 2263 or MATH 2374; Credit will not be granted if credit has been received for: STAT 4101; Instructor: Geyer, Charles J
Description: This section meets in a classroom in Minneapolis but is also televised to Rochester. For that reason all of the course material is on the web at the Course URL where slides, handouts, computer examples, homework assignments, and old tests can be found. This section does not have a required textbook. All STAT 5101 sections are supposed to cover the same material as Math 5651 and vice versa. One can follow Math 5651 with Stat 5102 or follow Stat 5101 with Math 5652. This section has more emphasis on multivariate distributions and multiparameter families of distributions.

Style: 80% Lecture, 20% Demonstration.
Grading: 20% mid exam, 40% final exam, 20% written homework. there are two midterms, so these add to 100%
Exam Format: problems to solve, see old tests on class web site

STAT 5101 Theory of Statistics I
4 credit(s); prereq MATH 2263 or MATH 2374; Credit will not be granted if credit has been received for: STAT 4101; Instructor: Yang,Yuhong
Description: This section meets in a classroom in Minneapolis but is also televised to Rochester. For that reason all of the course material is on the web at the Course URL where slides, handouts, computer examples, homework assignments, and old tests can be found. This section does not have a required textbook. All STAT 5101 sections are supposed to cover the same material as Math 5651 and vice versa. One can follow Math 5651 with Stat 5102 or follow Stat 5101 with Math 5652. This section has more emphasis on multivariate distributions and multiparameter families of distributions.

Style: 80% Lecture, 20% Demonstration.
Grading: 20% mid exam, 40% final exam, 20% written homework. there are two midterms, so these add to 100%
Exam Format: problems to solve, see old tests on class web site

STAT 5303 Designing Experiments
4 credit(s); prereq 3022 or 4102 or 5021 or 5102 or instr consent; Instructor: Oehlert,Gary W
Description: This course covers basic experimental designs, when to use them, and how to analyze the results. We cover: completely randomized designs, factorial treatment structures, random and mixed effects models, complete and incomplete blocks, covariates, split plots, and response surfaces. Primarily lecture based, with discussion and computer work in the lab. This course is aimed at nonstatistics graduate students, but advanced undergraduates can also attend.

Style: 90% Lecture, 10% Laboratory.
Grading: 40% exam, 25% final exam, 15% special projects, 20% written homework.
Exam Format: problem solving

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
Instructor: Wang, Lan
Description: Student may contact the instructor or department for information.

STAT 8053 Applied Statistical Methods 3: Multivariate Analysis and Advanced Regression
A-F only, 4 credit(s); prereq 8052, 8102;
Instructor: Weisberg, Sanford
Description: Student may contact the instructor or department for information.

STAT 8101 Theory of Statistics I
4 credit(s); prereq Statistics grad major or instr consent;
Instructor: Jiang, Tiefeng
Description: Student may contact the instructor or department for information.

STAT 8321 Regression Graphics
3 credit(s); prereq 8311;
Instructor: Cook, R. Dennis
Description: Student may contact the instructor or department for information.

STAT 8501 Introduction to Stochastic Processes with Applications
3 credit(s); prereq 5101 or 8101;
Instructor: Sudderth, William D.
Description: Text: Stochastic Processes by Sheldon Ross Brief Course Outline The course will cover material in Chapters 1 through 5 of the text on the Poisson process, renewal processes, and Markov chains in discrete and continuous time. Depending on time available and class preferences, we will also study topics from Chapters 6 through 8 on martingales, random walks, and Brownian motion. Other possible topics (not in the textbook) are Markov chains on general state spaces and diffusion processes.
Style: 100% Lecture.

STAT 8913 Literature Seminar
S-N only, 1 credit(s), max credits 4, 4 completions allowed; prereq Statistics grad major or instr consent;
Instructor: Meeden, Glen Dale
Description: Student may contact the instructor or department for information.

STAT 8931 Advanced Topics in Statistics
3 credit(s), max credits 12, 4 completions allowed;
Instructor: Cook, R. Dennis
Description: Student may contact the instructor or department for information.

**Stem Cell Biology**

**Stem Cell Institute**

STEM Cell 5051 Stem Cell Biology Practical Training Module
A-F only, 1 credit(s); prereq Acceptance into stem cell biology master's program;
Instructor: Slack, Jonathan M W
Description: This is a one credit course that is an integral part of the M.S. in Stem Cell Biology. It is not open to students on other programs. This is an Intensive two-week course that provides hands-on instruction in techniques of tissue culture, conventional, fluorescence, and confocal microscopy, and flow cytometry for both analysis of cell populations and sorting of cells.
Style: 100% Laboratory.
Grading: Assesment is by lab writeup and interview.

STEM Cell 5054 Stem Cell Institute Research Seminar and Journal Club
S-N only, 2 credit(s), max credits 6, 3 completions allowed; prereq Acceptance into stem cell biology [master's prog or PhD minor prog] or instr consent;

Instructor: Keirstead, Susan Alice
Description: The objectives of this course are to expose students to current research in Stem Cell Biology through attendance at weekly seminars and participation in a weekly journal club. Seminars are presented by members of the University of Minnesota research community as well as researchers from elsewhere in the United States and beyond. The journal club provides an opportunity for students to read current primary research papers and to gain insights into the research through discussions of the results and implications of the papers among members of the Stem Cell Institute.
Style: 45% Discussion, 5% Student Presentation, 50% Guest Speakers.
Grading: 50% written homework, 40% in-class presentation, 10% class participation.

STEM Cell 8181 Stem Cell Biology
3 credit(s); prereq [(GCD 4034 or 8121 or BIOC 8002), [GCD 4161 or 8161]] or instr consent;
Instructor: Slack, Jonathan M W
Description: Course Objectives: The course aims to provide beginning graduate students with an overview of stem cell biology. It will cover the biology of embryonic and adult stem cells, and be based on principles of developmental biology. Although primarily a biological science course it will include brief consideration of the ethical and legal aspects of embryonic stem cells, and some examples of clinical applications of cell therapy. Students will be expected to read primary research literature. Course topics: Embryonic stem cells: biochemistry of pluripotency; neural and hematopoietic stem cells; cell production and renewal in heart, skeletal muscle, kidney, pancreas and skin. Ethical and legal issues raised by embryonic stem cell work; clinical cell therapy in selected areas. Course director: Dr. Jonathan Slack. Because this is a team taught course, the director will ensure that the content is cohesive and non-redundant.
Style: 75% Lecture, 25% Student Presentation.
Grading: 20% mid exam, 50% final exam, 25% in-class presentation, 5% class participation.
Exam Format: Two in-class tests Final Exam - take home written exam

**Studies in Cinema and Media Culture**

235 Nicholson Hall

SCMC 1201 Introduction to Cinema and Media Culture
4 credit(s); prereq :: CSCL 1201; Credit will not be granted if credit has been received for: CSCL 1201; Meets CLE req of Arts/Humanities;
Instructor: STAFF
Description: The emergence of what is variously referred to as the "Information Age" and "Society of the Spectacle" has made it necessary for us to think critically about the media. Since visual media have the most pervasive influence on our everyday lives, this course will focus on how forms such as advertising, film, and television work, affect perception, and structure meaning. We will read some of the most important theoretical and historical texts that provide insight into our "ways of seeing." No prior exposure to media theory is expected, but although this is an introductory class, students will be expected to read and work through challenging material. We will read a variety of critics who have attempted to analyze cinema and media culture and we will also begin to develop a vocabulary for formal visual analysis.

**Studies of Science and Technology**

746 Heller Hall

SST 8000 Colloquium

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
S-N only, 1.5 credit(s), max credits 3; prereq Grad SST minor; Instructor: STAFF
Description: This colloquium is a series of weekly lectures by nationally and internationally known scholars with diverse disciplinary and methodological backgrounds speaking on a variety of issues on the philosophy and history of science and technology.

SST 8400 Seminar: Science, Technology, and Society
3 credit(s); prereq HSCI 8111 or [Phil 8601 or Phil 8602 or Phil 8605] or instr consent; Instructor: STAFF
Description: Student may contact the instructor or department for information.

SST 8420 Seminar: Social and Cultural Studies of Science
3 credit(s), max credits 6; Credit will not be granted if credit has been received for: PHIL 8660; Instructor: Jones, Susan D.
Description: Student may contact the instructor or department for information.

Sustainability Studies
190 Coffey Hall

SUST 3003 Sustainable People, Sustainable Planet
3 credit(s); prereq Soph or jr or sr; Credit will not be granted if credit has been received for: GLOS 3304; Meets CLE req of Environment; Instructor: Arnold, Todd W.
Description: Sustainability recognizes that economic growth, social equity, and environmental integrity are all worthy goals, but that these goals compete so that it is impossible to maximize all three of them concurrently. Some objectives of sustainability are therefore realized at the cost of other equally valid objectives. Sustainable People, Sustainable Planet provides an historical, ethical and technical overview of various models for understanding sustainability. It also demonstrates, by utilizing a variety of real-world case studies, the conflicts and trade-offs that occur from trying to put sustainability into practice. The course is intended for sophomores and above who are interested in completing the Sustainability Studies Minor, and for all students who are interested in the subject and wish to satisfy the University's liberal education theme for the Environment. The course should be considered "reading intensive" but it has no prerequisites.
Style: 70% Lecture, 30% Discussion.
Grading: 67% reports/papers, 23% special projects, 10% class participation.

SUST 3480 Topics in Sustainability
A-F only, 1-4 credit(s), max credits 24, 6 completions allowed; Instructor: Anderson, Ellen Ruth
Description: This class will give students a basic understanding of the science and ecosystem impacts of climate change, the United Nations Framework on Climate Change (UNFCCC) process, a practical knowledge of the laws and policies relating to climate change and energy in play at the local level, a review of national policies being debated on climate change, and the knowledge students need to understand and navigate the international United Nations framework and related negotiations on the topic. Students will be equipped with the expertise and understanding they need to observe and participate either virtually or through study abroad in the international negotiations scheduled for November 28-December 19, 2010 in Mexico. Student travel would occur between November 28 and December 6, 2010. Course Goals and Learning Objectives? Learn political, economic, and scientific implications of climate change? Examine diverse perspectives and learn to frame issues effectively? Explore the options for change at all levels, including local, state, regional, national and global? Understand the laws, regulations, and international documents on climate change policy? Learn how to navigate the international UN negotiations process? Create web based or other strategies for communicating learned concepts Readings will include: Lester Brown, Plan B 5.0, Bill McKibben, Eaarth, Thomas Friedman, Hot, Flat & Crowded, US Global Change Research Project/NOAA Report: Global Climate Change Impacts in the United States; IPCC Fourth Assessment Report: Climate Change 2007 (AR4); James Hansen, Storms of my Grandchildren; Renewable Energy Standard law, Minn. Stat. Sec. 216B.1691, Wind Integration Analysis (Public Utilities Commission 2006); OES wind resource maps; Wind Energy for Electric Power?a REPP Issue Brief (2003); Wind Power: Impacts on Wildlife and Government Responsibilities for Regulating Development and Protecting Wildlife (2005) U.S. GAO and more. Speakers will include staff from Fresh Energy, Windustry, the American Wind Industry Association, the Institute for Local Self Reliance, the Great Plains Institute and key energy research faculty at the University.

SUST 4004 Sustainable Communities
A-F only, 3 credit(s); prereq [3003 or GLOS 3304, jr or sr] in sustainability studies minor] or instr consent; Instructor: Anderson, Ellen Ruth
Description: Students synthesize multiple disciplinary perspectives and integrate insights gained from various approaches/methods. Concepts/scholarship related to sustainability. Applying knowledge/experience to real sustainability problems.

SUST 4096 Sustainability Internship
A-F only, 1-4 credit(s), max credits 8; prereq Familiarity with sustainability concepts through acad work or other experiences; Instructor: Wanberg, David
Description: Four to ten hour per week internship experience related to a sustainability theme or approach, such as sustainable foods, green building, renewable energy or environmental justice. Intern in a nonprofit, governmental, educational or business organization, from choices provided or approved by instructor.

Sustainable Agricultural Systems
411 Borlaug Hall

SAGR 8010 Colloquium in Sustainable Agriculture
A-F only, 2 credit(s); prereq Coursework in biological or social sciences that provides intro to ag practices or issues; Instructor: Sheaffer, Craig Charles
Description: Study the social, economic, political and environmental aspects of a sustainable agriculture through discussions with experts in the field. Specific topics can include: the history of agriculture and the family farm, government farm policy, the importance of biodiversity for healthy landscapes, rural communities, quality of life, community supported agriculture, organic agriculture, landscape health and non-profit organizations. Teaching approaches will include student, faculty and producer-led discussions. The course will include on-farm visits. Target audience: non-majors and majors interested in sustainable agriculture.

SAGR 8020 Field Experience in Sustainable Agriculture
S-N only, 1-4 credit(s), max credits 3, 1 completion allowed; prereq Coursework in biological or social sciences that provides intro to ag practices or issues; Instructor: Jordan, Matthewt Roeng
Description: Student may contact the instructor or department for information.

Swahili
SWED 1001 Beginning Swedish
5 credit(s); Credit will not be granted if credit has been received for: SWED 4001; Instructor: STAFF
Description: This is the first course in the first-year language instruction sequence (1001-2), designed to develop a basic communicative proficiency in Swedish. Students will practice the four language skills (speaking, writing, reading, and listening) and learn to handle simple, everyday transactions. Class sessions will emphasize interactive communicative activities in pairs and small groups, with a focus on improving listening and speaking skills. Additional class time will be spent on reading, writing, and grammar. Students are expected to practice these skills outside of class as well. Learning about life and culture in Sweden is an integral part of the course. See the description for Swed 4001 for an option for qualified students to register for this course for 2 credits (and lower tuition) instead of 4 credits. Style: 10% Lecture, 70% Discussion, 20% Laboratory. Grading: 100% other evaluation. 50% reading/writing, 50% oral/aural
Exam Format: structured exercises in all 4 modalities and grammar, pronunciation, vocabulary and culture

Swedish
192 Klaeber Court

SWED 1002 Beginning Swedish
5 credit(s); prereq 1001; Credit will not be granted if credit has been received for: SWED 4002; Instructor: STAFF
Description: This course continues the beginning sequence in Swedish, which covers four language skills: listening, speaking, reading and writing. Students will also gain knowledge of Swedish culture through various means, including audio-visual aids available in the language laboratory. Lecture, class discussions and classroom exercises will be conducted in Swedish. Class sessions will emphasize interactive communicative activities in pairs and small groups, with a focus on improving listening and speaking skills. Additional class time will be spent on reading, writing, and grammar. Students are expected to practice these skills outside of class as well. Learning about life and culture in Sweden is an integral part of the course. You may register for this course under the number Swed 4002 for a reduced number of credits (and lower tuition) if you have already passed the Language Proficiency Exam (LPE) in another language or are a graduate student or a non-degree-seeking student. Contact the Department Office at (612) 625-2080 for a permission number. Style: 10% Lecture, 70% Discussion, 20% Laboratory. 50% reading/writing; 50% oral/aural

SWED 1003 Intermediate Swedish
5 credit(s); prereq 1002; Credit will not be granted if credit has been received for: SWED 4003; Instructor: STAFF
Description: This course continues the presentation of language skills--speaking, writing, listening and reading begun in Swedish 1001-2 (or quarter system courses 1101-2-3). Students will review, examine and develop these skills through a content-based curriculum. Students will be introduced to a variety of Swedish texts--stories, songs, newspaper articles, video and Internet resources. The review of basic points of Swedish grammar with an emphasis on sentence structure and word order will enable students to improve their writing skills in connection with process-oriented writing assignments. Vocabulary building will be supported by a rich array of texts that the students will be reading during their second year. Speaking and listening will be practiced in role play activities involving representative social situations. The interactive will familiarize students with the different levels of formality and intimacy used in conversational settings, and the codes and mythologies unique
to Swedish culture. See the description for Swed 4003 for an option for qualified students to register for this course for 2 credits (and lower tuition) instead of 4 credits.

**Style:** 10% Lecture, 70% Discussion, 20% Laboratory.

**Grading:** 100% other evaluation, 50% reading/writing, 50% oral/aural

**Exam Format:** written essays, listening and reading protocols, structural exercises, oral interviews

### TMJ/Craniofacial Pain

**15-209 Malcolm Moos Health Sciences Tower**

#### TMJP 8440 Advanced Theory and Principles of TMJ and Craniofacial Pain

**A-F only, 0-3 credit(s), max credits 3, 1 completion allowed;**

**Instructor:** Mulet Pradera DDS,MS,Mariona

**Description:** Student may contact the instructor or department for information.

#### TMJP 8441 Seminar in TMJ and Craniofacial Pain

**A-F only, 1 credit(s);**

**Instructor:** Giri,Subha

**Description:** Student may contact the instructor or department for information.

#### TMJP 8442 Advanced Clinical TMJ and Craniofacial Pain

**A-F only, 1-4 credit(s), max credits 4, 1 completion allowed; prereq Participation in TMJ and orofacial pain advanced education program:**

**Instructor:** Mulet Pradera DDS,MS,Mariona

**Description:** This course provides the student with clinical experience in the diagnosis and management of TMD, complex chronic orofacial pain and oral medicine conditions under the supervision of the course director and/or other faculty. A multidisciplinary treatment approach of patients with TMD and orofacial pain is used.

### Theatre Arts

**580 Rarig Center**

#### TH 1101V Honors Section: Introduction to the Theater

**A-F only, 4 credit(s); prereq Honors; Meets CLE req of Arts/Humanities; meets CLE req of Writing Intensive;**

**Instructor:** Kuftinec,Sonja

**Description:** Student may contact the instructor or department for information.

#### TH 1101W Introduction to the Theatre

**4 credit(s); Meets CLE req of Arts/Humanities; meets CLE req of Writing Intensive;**

**Instructor:** Kuftinec,Sonja

**Description:** Student may contact the instructor or department for information.

#### TH 1102 Drama and the Media

**3 credit(s); Meets CLE req of Arts/Humanities;**

**Instructor:** Werry,Margaret L

**Description:** In this course, we will explore what drama is and does in different media. We ask how drama relates to our daily lives, as well as to our ideas about society, family, politics, technology, imagination, and media itself. Students learn to interpret television, cinema, and radio dramas with attention to elements of dramatic technique, and through analytic and creative activities, they investigate the ways in which different media can open up new possibilities for dramatic expression. We examine the ways in which cultural, social, and economic factors shape the form drama takes and the stories it tells. Lectures and readings introduce a range of approaches that cultural theorists have developed to explain the popularity and effects of drama in different media. And we put these to the test in class discussions and in responses to a variety of films and television examples viewed in class. This course is appropriate for students of all majors and has no pre-requisites, except an interest in popular culture and a willingness to grapple with challenging questions about an aspect of American life we normally take for granted.

This course will be web enhanced but the URL is not yet available.

**Style:** 30% Lecture, 30% Discussion. class workshops and viewing videos

**Grading:** 25% mid exam, 25% final exam, 15% reports/papers, 15% special projects, 20% class participation.

**Exam Format:** essay and short question

#### TH 1301 Acting/Non-Majors

**3 credit(s);**

**Instructor:** STAFF

**Description:** This course is designed to enable students without prior experience in theatre to better appreciate theatrical elements, develop a vocabulary for discussing theatre, and recognize the degree to which the study of basic acting techniques can inform perceptions of self and others. Students are taught how to act within imaginary circumstances, make bold choices, and develop interpersonal trust and ensemble awareness. Required text: ACTING ONE by Robert Cohen.

**Style:** 10% Discussion, 90% Laboratory.

**Grading:** 30% reports/papers, 30% in-class presentation, 20% other evaluation. Attendance & Participation; 20% Attitude & Growth.

#### TH 1321 Beginning Acting: Fundamentals of Performance

**3 credit(s); prereq 1101 or Concurrent registration is required (or allowed) in 1101;**

**Instructor:** STAFF

**Description:** Introduces beginning students to a widely applicable, comprehensive vocabulary and techniques for practical performance studies, including the use and training of the instrument; the creation of theatrical ideas or choices; the creation of dramatic &quot;phrases&quot; by sequencing ideas and choices to tell stories; and the significance of circumstances for choice making. The course has three overarching objectives: providing an introduction to creation processes specific to the performer, psychological and physical training of the acting instrument, and training the personal imagination. The first part of a two-course sequence (with TH 1322, Creating the Performance) intended for theatre arts majors. Required reading: introduction of performance processes, theories and
TH 1322 Creating the Performance
3 credit(s); prereq 1321 or Concurrent registration is required (or allowed) in 1321 or 1501 or Concurrent registration is required (or allowed) in 1501;

Instructor: Seifert,Luverne G
Description: Student may contact the instructor or department for information.

TH 1362 Dance for Musical Theatre
A-F only, 2 credit(s); Credit will not be granted if credit has been received for: DNCE 1362;

Instructor: Lee,Linda Talcott
Description: This class will introduce a variety of dance styles found in Musical Theatre currently and in the past. The works of prominent choreographers in this field, such as Jerome Robbins, Bob Fosse, Michael Bennett and Michael Kidd will be discussed and learned through movement across the floor, center exercises and center combinations. A technical jazz warm up will be given at the start of each class to prepare the body for energetic movement as well as giving the student an understanding of body placement, dance vocabulary, and style. Emphasis will be placed on stretching emotional boundaries through movement, creating the ability to develop a character, a talent needed in musical theatre dancing. Prior dance training is recommended, but not necessary as long as the student enters with an open mind. This class will have live accompaniment.

Style: Studio

TH 1391 BFA Acting I
A-F only, 3 credit(s); prereq Accepted into BFA acting program;

Instructor: Cardamone,Steve
Description: Student may contact the instructor or department for information.

TH 1392 BFA Voice and Speech I
A-F only, 2 credit(s); prereq Accepted into BFA acting prog;

Instructor: Holshue,Lucinda A
Description: Student may contact the instructor or department for information.

TH 1393 BFA Movement I
A-F only, 2 credit(s); prereq BFA-acting major;

Instructor: Weaver,Margie E
Description: Student may contact the instructor or department for information.

TH 1501 Introduction to Design and Technology for Live Performance
A-F only, 3 credit(s); prereq 1101 or Concurrent registration is required (or allowed) in 1101;

Instructor: Dilliard,Marcus F
Description: Student may contact the instructor or department for information.

TH 1905 Freshman Seminar
A-F only, 3 credit(s), max credits 6; prereq Fr or fewer than 30 cr;

Instructor: Nash,Elizabeth
Description: Student may contact the instructor or department for information.

TH 1905 Freshman Seminar
A-F only, 3 credit(s), max credits 6; prereq Fr or fewer than 30 cr;

Instructor: Sommers,Michael J
Description: Student may contact the instructor or department for information.

TH 2391 BFA Acting III
A-F only, 3 credit(s); prereq BFA student in theatre arts;

Instructor: Cardamone,Steve
Description: Student may contact the instructor or department for information.

TH 2392 BFA Voice and Speech III
A-F only, 2 credit(s); prereq BFA student in theatre arts;

Instructor: Cooke,Andrew
Description: Student may contact the instructor or department for information.

TH 2393 BFA Movement III
A-F only, 2 credit(s); prereq BFA student in theatre arts;

Instructor: Wallum,Tina Anderson
Description: Student may contact the instructor or department for information.

TH 3100 Theatre Practicum
S-N only, 1 credit(s), max credits 4, 4 completions allowed; prereq 1101; only two enrollments as actor may count toward a major;

Instructor: STAFF
Description: Do you want to get involved in production on the Main Season for University Theatre? This is a course that can give you that opportunity. You will be assigned a specific position on a production and get a chance to work on as well as see first hand what goes into a full scale theatrical production. Come and explore the possibilities.

Style: 5% Lecture, 95% Laboratory.
Grading: 5% class participation, 95% laboratory evaluation.

TH 3115 Introduction to Playwriting
3 credit(s);

Instructor: Taylor,Dominic A
Description: Student may contact the instructor or department for information.

TH 3171 History of the Theatre: Ancient Greece Through Neo-Classicism
3 credit(s); prereq Th major or instr consent;

Instructor: Kobialka,Michal A
Description: The course focuses on a critical examination of representational practices in the period from Ancient Greece to the French Revolution. While reviewing these representational practices, which materialize as play-texts, performances, theatre architecture, theatre rebellions and regulations, theoretical writings, etc., the students will discuss how they were produced, given intelligibility, and disseminated. What are the consequences of using or promoting these and not other representational practices? In order to answer this question, the students will explore the following questions/issues: the Western origins of theatre and drama, Aristotle’s Poetics, the practices of controlling and censoring creative activities in Rome and in Renaissance Italy and England, the emergence of medieval liturgical drama as well as medieval modes of representation, a shift from resemblance oriented visual systems to the neoclassical ideal of the French Academy, the female actors and playwright in Restoration, the drama and theatre of the long eighteenth century and how they participated in the process of fashioning a new personality/economic type. This course investigates how performance events are brought to our attention, how they are made worthy of notice, and how they are rationalized as significant for theatre history.

Style: 5% Lecture, 95% Laboratory.
Grading: 5% class participation, 95% laboratory evaluation.

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
TH 3316 Voice for the Actor  
A-F only, 3 credit(s); prereq 1101, 1321, 1322;  
Instructor: Nash, Elizabeth  
Description: Student may contact the instructor or department for information.  

TH 3321 Stanislavski and Techniques for Characterization  
3 credit(s); prereq 1322, [3314 or concurrent enrollment 3314], audition;  
Instructor: Kingsley, Barbara  
Description: Student may contact the instructor or department for information.  

TH 3330 Physical Approaches to Acting  
3 credit(s), max credits 6; prereq 1322, [3314 or Concurrent registration is required (or allowed) in 3314], audition, instr consent;  
Instructor: Sefert, Luverne G  
Description: Physical approaches to acting will intensely explore the psychophysical methodology of Jacques Lecoq with emphasis on neutral mask, acrobatics, commedia, clowning and buffooning. The course will investigate poetic, tragic and playful performance through the analysis of movement and gesture. Students will create solo and collaborative performances. Entrance is by audition after completion of 1321 Fundamentals of Performance and 1322 Creating the Performance. Required reading: The Moving Body by Jacques Lecoq, Invisible Cities by Italo Calvino and selected plays and readings.  
Style: 10% Lecture, 10% Discussion, 80% Laboratory.  
Grading: 20% reports/papers, 30% in-class presentation, 50% class participation.  

TH 3521 Introduction to Scenic Design for Theater and Performance  
3 credit(s); prereq 3571;  
Instructor: Brockman, C Lance  
Description: This course provides students with basic information on the creative process of scenic/properties design for the theatre and performance. Students are asked to assume the role of scene designer and through a series of exercises, approximate the creative steps in developing an environment—in both scaled model and/or sketch—for the stage or live performance. Skills developed include basic representational drawing for value, painting with color, and drafting necessary for execution of designs. As with the process of designing in the ‘real world’, success depends on a systematic execution of each step along the way.  

TH 3571 Introduction to Stage Technology  
A-F only, 3 credit(s); prereq 1501;  
Instructor: Binder-Pettigrew, Susan M  
Description: Student may contact the instructor or department for information.  

TH 3716 Stage Management  
A-F only, 4 credit(s); prereq 1501 or instr consent;  
Instructor: Swartwout, Christine M  
Description: Student may contact the instructor or department for information.  

TH 4177W Survey of Dramatic Literature I: Strategic Interpretation  
3 credit(s); prereq [3171, 3172], [jr or sr] or instr consent;  
Meets CLE reg of Writing Intensive;  
Instructor: Werry, Margaret L  
Description: Student may contact the instructor or department for information.  

TH 4321 Career Preparation for the Actor  
3 credit(s); prereq 3322;  
Instructor: Diercks, Shirley V  
Description: A comprehensive look at the world of Theatre that awaits today's young graduates. This class is intended to provide exposure to the myriad paths available to theatre majors upon completion of their formal education. The class will be comprised of discussions with varying personalities who have achieved a modicum of "success" measured by their own ambitions as well as the standards set by our profession. Students will also venture into the community at large and interview a specialist of their choosing and submit a written report as well as make a formal class presentation. We will also be devoting significant time in and outside of class to research the necessary tools of the trade - photos, resumes, contact sheets, and of utmost importance, the student's audition materials.  
Style: 10% Lecture, 20% Discussion, 30% Laboratory, 30% Student Presentation, 10% Guest Speakers.  
Grading: 30% attendance, 10% journal, 30% in-class presentation, 30% laboratory evaluation. This class is a laboratory/skill improvement class, and participation is key. Growth in performing for a professional career in Theatre and all related fields of opportunity.  

TH 4322 Acting for the Camera  
3 credit(s); prereq 1301 or 3321;  
Instructor: Diercks, Shirley V  
Description: This is a valuable course to help the actor/student interested in film, to find, through varied assignments their adaptability to the camera. The participant should be prepared to be on--camera most class days. We will assign storytelling, editorial presentation, industrial exercises, and finally performance in a short film scene with full preparation as to memory, scenic design and props, appropriate lighting and setting. There will be a crew of students to assist the Professor and TA in these productions. All will be followed by the student participation in the editing process of their own work. Welcome to the world of the camera Shirley Venard.  
Grading: 10% reports/papers, 10% quizzes, 60% in-class presentation, 20% class participation. "It is unnecessary to give a percentage amount to 'attendance'as none of the above percentages will be possible if you are not there."  
Exam Format: Quizzes and then a final paper to serve as an exam.  

TH 4380 Creative Collaboration  
1-3 credit(s), max credits 12, 4 completions allowed; prereq Audition, interview, instr consent;  
Instructor: STAFF  
Description: Ensemble creation of a single theatre performance work. Creative/dramaturgical work. Public showing of work, completed or in-progress. Students work collaboratively with faculty or affiliate guest artists.  

TH 4391 BFA Intensive II  
A-F only, 2 credit(s); prereq BFA student in theatre arts;  
Instructor: Lorca, Marcella Kingman  
Description: Student may contact the instructor or department for information.  

TH 4394 BFA Rehearsal and Performance IV  
A-F only, 2 credit(s); prereq BFA student in theatre arts;  
Instructor: Lorca, Marcella Kingman  
Description: Student may contact the instructor or department for information.  

TH 4532 Makeup for the Actor  
2 credit(s);  
Instructor: Bundick, Theresa Jane  
Description: Student may contact the instructor or department for information.  

TH 4555 Audio Technology  
3 credit(s);  
Instructor: Johnson, Montana J  
Description: Student may contact the instructor or department for information.  

TH 4711 Intermediate Stage Direction  
3 credit(s); prereq 1322 or instr consent;  
Instructor: Taylor, Dominic A  
Description: Student may contact the instructor or department for information.
TH 490SH Honors: Tutorial Seminar in Theatre Arts
A-F only, 2-4 credit(s), max credits 4, 1 completion allowed; prereq =4905; honors, theatre arts, dept consent; limit [2 cr for [cum laude or magna cum laude], 4 cr for summa cum laude];
Instructor: STAFF
Description: Student may contact the instructor or department for information.

TH 5100 Theatre Practicum
1-4 credit(s), max credits 20, 10 completions allowed; prereq instr consent, dept consent; 4 cr of 3100 for undergrads;
Instructor: STAFF
Description: Individual creative projects in production of approved plays as an actor, director, dramaturg or playwright.

TH 5117 Performance and Social Change
A-F only, 3 credit(s); prereq Jr or sr or grad student;
Instructor: Kuftinec, Sonja
Description: Taught with Maria Asp (Children's Theatre) this class provides internship opportunities with Neighborhood Bridges (an arts literacy program in K-12 schools), Washburn High School's theater classes, and St. Paul Central High School's theater classes, arts literacy, and Seeds of Change program--a support group by and for African American males and their allies addressing the educational ?achievement gap.? The class meets one a week for skill-building, scholarly framing, and reflections on the process of becoming a teaching artist. Graduate students may use the class as an opportunity for participatory action research with the above listed sites. Readings/fragments include Paulo Freire, bell hooks, Gloria Anzaldua, Michel Foucault, Bill Ayres, Augusto Boal, Jack Zipes, Cynthia Lewis, Henry Giroux, Cynthia Lewis and others. An INTERVIEW WITH INSTRUCTOR IS REQUIRED FOR ENROLLMENT.
Style: 10% Lecture, 25% Discussion, 25% Small Group Activities, 25% Student Presentation, 15% Demonstration. performance workshops; As embodied learning exemplifies the pedagogical approach of this activist course, students will research contemporary, local and historical projects as well as create their own. Grading: 25% reports/papers, 25% special projects, 25% in-class presentation, 25% class participation.

TH 5340 Tragedy/Poetry: Advanced Physical Performance Studio
A-F only, 3 credit(s), max credits 6; prereq [3322, 3331, grad student] or instr consent;
Instructor: Berlovitz, Barbara Anne
Description: The Winter's Tale Over the course of the semester the student will discover an open and physical approach to speaking Shakespeare. Through a series of physical and vocal exercises the student will learn to speak the text on the breath of the character. The student will prepare for rehearsal by discovering what it feels like to be free from judgment and open for discovery. And we will work to unlock the passion found in Shakespeare's text. Much of the work will be individual although many of the exercises will be done as an ensemble. We will strive to increase the student's imagination, improve the involvement of their breath in the work and learn to be present on the stage and in rehearsal. A minimal amount of time will be spent reviewing the fundamentals of speaking and a heightened language and developing this part of the craft. The focus of the semester will be on A Winter's Tale. Patsy Rodenburg's Speaking Shakespeare is reserved reading for the class.

TH 5355 Puppetry: Techniques and Practice in Contemporary Theater
3 credit(s); prereq [3513 or &3513], instr consent] or grad student;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

TH 5500 Theatre Design Practicum
1-3 credit(s), max credits 20, 10 completions allowed; prereq 3515, instr consent, dept consent;
Instructor: STAFF
Description: Individual projects in production of approved plays as a designer for scenery/properties, costumes, lighting or sound.
Style: 100% Laboratory. Grading: 100% other evaluation. final production and prep work

TH 5510 Drawing, Rendering, and Painting for the Theatre
Designer I
3 credit(s); prereq 3515 or grad or instr consent;
Instructor: Lefebvre, Mathew James
Description: Student may contact the instructor or department for information.

TH 5530 Costume Design
3 credit(s), max credits 9, 3 completions allowed; prereq 3515 or grad or instr consent;
Instructor: Lefebvre, Mathew James
Description: Student may contact the instructor or department for information.

TH 5540 Lighting Design for the Theatre
3 credit(s), max credits 9, 3 completions allowed; prereq 3515 or grad or instr consent;
Instructor: Dillard, Marcus F
Description: Student may contact the instructor or department for information.

TH 5550 Costume Technology
3 credit(s), max credits 15, 5 completions allowed; prereq 3515 or grad or instr consent;
Instructor: Binder-Pettigrew, Susan M
Description: Spring Semester's emphasis is Draping. The student will gain working knowledge of pattern making using a technique where in a pattern is achieved by draping and manipulating fabric directly on a dressmaker's form.

TH 5560 Advanced Stage Management
2-3 credit(s), max credits 3, 1 completion allowed; prereq 5716 or concurrent enrollment 5716, instr consent; [4 cr max for undergrads];
Instructor: Swartwout, Christine M
Description: Student may contact the instructor or department for information.

TH 5716 Stage Management for the Theatre
4 credit(s); prereq [1101, 1321, soph] or grad;
Instructor: Swartwout, Christine M
Description: Student may contact the instructor or department for information.

TH 5750 Topics in Theatre
1-4 credit(s), max credits 20, 20 completions allowed;
Instructor: STAFF
Description: Casa Cushman is a new play about the life and work of 19th century American actress Charlotte Cushman. One of the most important actresses of her time, Cushman was famous for her interpretation of the leading MALE roles in Shakespeare. Cushman continually challenged Victorian notions of gender in her stage portrayals of male characters and of strong, androgynous female characters. When Charlotte Cushman made her last appearance in New York in 1874, a reported 14,000 fans filled the streets at 23rd Street from 5th to 6th Avenues just to catch a glimpse of the actress from her balcony. Cushman not only challenged Victorian notions of
gender onstage, she played the man in every area of her life. She gathered around her an incredible circle of emancipated 19th century women: painters, poets, sculptors and literary women, many of whom she financially supported. And she had intense love affairs with several of them. There is at the Library of Congress a collection of over 1,000 unpublished letters, written by Cushman to Emma Crow, the transcription of which has been a 10-year labor of love by scholar Lisa Merrill. Many of Cushman?s letters to Crow include the directive: ?burn this letter.?, but they were not burned. Preserved, they chronicle a passionate Victorian-era lesbian love story before such love was thought to exist.

**Grading:** Performance projects  
**Exam Format:** Performance projects

<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Instructor(s)</th>
<th>Description</th>
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<tr>
<td>TRAD 8350 Research: Radiation Therapy</td>
<td>1-15 credit(s), max credits 15, 1 completion allowed</td>
<td>Dusenbery MD, Kathryn E</td>
<td>Student may contact the instructor or department for information.</td>
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<td>TRAD 8325 Radiation Therapy Pediatrics Oncology</td>
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**Toxicology**

**244 Veterinary Diagnostic Lab**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Instructor(s)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>TXCL 5195 Veterinary Toxicology</td>
<td>A-F only, 3 credit(s)</td>
<td>Murphy, Michael J</td>
<td>Student may contact the instructor or department for information.</td>
<td></td>
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<tr>
<td>TXCL 8103 Advanced Toxicology II</td>
<td>A-F only, 3 credit(s)</td>
<td>Murphy, Michael J</td>
<td>Student may contact the instructor or department for information.</td>
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<tr>
<td>TXCL 8100 Investigative Toxicology</td>
<td>A-F only, 1 credit(s), max credits 2</td>
<td>Wallace, Kendall B</td>
<td>Student may contact the instructor or department for information.</td>
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</tr>
</tbody>
</table>

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**Translation and Interpreting**

**101 Wesbrook Hall**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Instructor(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIN 1201 Health Care Terms and Concepts for Interpreters</td>
<td>A-F only, 3 credit(s)</td>
<td>Meininger, Eric Thomas</td>
<td>Student may contact the instructor or department for information.</td>
<td></td>
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</tr>
<tr>
<td>TRIN 1204 Tumor Clinic Conference</td>
<td>0 credit(s)</td>
<td>Dusenbery MD, Kathryn E</td>
<td>Student may contact the instructor or department for information.</td>
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<tr>
<td>TRIN 1204 Radiation Therapy Conference</td>
<td>0 credit(s)</td>
<td>Lee, Chung Kyu</td>
<td>Student may contact the instructor or department for information.</td>
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<tr>
<td>TRIN 1201 Fundamentals of Radiation Therapy</td>
<td>1 credit(s)</td>
<td>Lee, Chung Kyu</td>
<td>Student may contact the instructor or department for information.</td>
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<tr>
<td>TRIN 1202 Radiation Therapy Treatment Planning Problems</td>
<td>1 credit(s)</td>
<td>Orner MD, James B</td>
<td>Student may contact the instructor or department for information.</td>
<td></td>
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<tr>
<td>TRIN 1205 Research: Radiation Therapy</td>
<td>1-15 credit(s), max credits 15, 1 completion allowed</td>
<td>Dusenbery MD, Kathryn E</td>
<td>Student may contact the instructor or department for information.</td>
<td></td>
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</tr>
</tbody>
</table>

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at [http://onestop.umn.edu](http://onestop.umn.edu). IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
6:10pm starting time.
Grading: 45% mid exam, 30% final exam, 15% written homework, 10% class participation. The class participation percentage will reflect attendance.
Exam Format: Students must pass three in-class tests on technical terms and concepts (fill in the blank, true/false, multiple choice). The final, cumulative exam will also include an essay.

TRIN 3001 Introduction to Translation
3 credit(s); prerequisite Bilingual proficiency in [English, second language of instruction];
Instructor: STAFF
Description: An introductory course in translation oriented toward the translation of documents written in English into the languages of non-English-speaking residents of our communities. The course includes both theory and supervised practice. As an exercise in re-expressing meaning in a second language, the course provides a solid basis for training in interpreting, as well as for translation.

TRIN 3001 Introduction to Translation
3 credit(s); prerequisite Bilingual proficiency in [English, second language of instruction];
Instructor: Giannini, Claudia A
Description: This is a fully online section offered through Online and Distance Learning (ODL), College of Continuing Education. Visit "Class URL" for ODL policy, fee, and financial aid information. This course will give students the basic theoretical and practical background necessary to translate documents intended to inform and educate the general public in a way that is both culturally sensitive and stylistically appropriate. It will prepare students for further instruction in community translation and interpreting.
Style: Online with partly handwritten exam
Grading: --Online discussions and quizzes each week (15%) --5 online peer reviews of short translation assignments (10%) --4 short translation assignments (20%) --Term translation project (20%) --Midcourse exam (15%) --Final exam: 2 exams (20%)
Exam Format: --Final 2 exams?one online, one proctored

TRIN 301 Introduction to Interpreting
3 credit(s); prerequisite high level of proficiency in spoken English and another language; 3001 recommended;
Instructor: STAFF
Description: A practical and theoretical introduction to interpreting in health, human service, and legal settings. Emphasis on understanding the unique role of the interpreter, current models and modes of interpreting, ethical issues and professional standards of practice, and developing skills in understanding and analyzing spoken language.

URBS 1001W Introduction to Urban Studies: The Complexity of Metropolitan Life
A-F only, 3 credit(s); Meets CLE req of Writing Intensive;
Instructor: Martin, Judith A
Description: This course is an overview introduction to the field of Urban Studies. It draws from a number of different disciplines which contribute to the study of cities, and tries to promote an understanding of the complexity of urban environments. The course ranges from historical considerations of cities to contemporary problem areas, and promotes active learning on the part of students.

URBS 3201 Urban Studies Colloquium
A-F only, 1 credit(s), max credits 4, 4 completions allowed;
Instructor: STAFF
Description: Sec 003 Corridor and redevelopment studies play an important role in planning, land use and development within large and small communities. This course will explore the inter-relationship that public realm, housing and redevelopment, transportation, economics and social issues play in creating a sense of place among corridors. During this course we will examine each of these elements and how they function within the greater context of a corridor. Mike Darrow is a planner with SEH

URBS 3301W American Cities As Settings for Cultural Diversity
3 credit(s); Meets CLE req of Writing Intensive;
Instructor: Pentel, Paula R
Description: What do ethnic restaurants, murals, office towers, houses, malls and corner stores tell us about the cultural evolution of urban areas? How does institutional planning enable or constrain expressions of culture? American Cities as Settings for Cultural Diversity is a dynamic, interactive course, which gives students a chance to apply classroom learning to a creative semester project. In all city landscapes, urban and suburban, the imprint of arts, ethnicity, race, gender, age, religion and class are visible. The goal of this course is to enable students to comprehend how and why our cities reflect these differences, and to see how places change over time due to various cultural influences. The impact of cultural diversity can be inequity, or it can suggest a celebration of place. So, bring your creative mind and be prepared to develop your analytical gaze.

URBS 3500 Urban Studies Workshop
A-F only, 3 credit(s), max credits 9, 3 completions allowed;
Instructor: STAFF
Description: URBS 3500 Urban Studies Workshops sec -001 Revitalization: Planning and Implementation, 06:30 P.M. - 09:30 P.M. M (01/22/2008 - 03/06/2008) 3 credits This workshop
examines what it takes to revitalize neighborhoods or commercial areas in disadvantaged communities. This is a daunting challenge because of the multiple and inter-related factors that perpetuate the disadvantaged condition. As a class, we will work to understand the nature of that challenge, and we will explore and discuss a toolkit of analytical methods, development and business strategies, and organizational approaches that can be instrumental in overcoming barriers and fostering positive change. Students will develop a case study that examines a successful revitalization process, and identify the planning and implementation elements that were most pivotal in that process. Tom Leighton, AICP is a principal planner with the city of Minneapolis. sec -002 Urban Real Estate Development: Fundamentals, Process and Outcome 06:00 P.M. - 09:00 P.M. , W (01/22/2008 - 05/09/2008), Blegen H 240 , TCWESTBANK , 3 credits This course will (1) explore and explain disparate disciplines that interact with and depend on each other in urban real estate development while (2) explaining development itself as a holistic, ecological process and profession. The class will first explore the fundamental disciplines involved in the urban real estate development process, including budgeting and finance, property management and asset management. Then the course will examine these fundamentals in simulated real estate developments in a chosen Twin Cities neighborhood. The class will have a chance to explore high profile, ongoing Twin Cities? development(s) through site visit(s). Students must have or be willing to develop a basic comfort with spreadsheets (Microsoft Excel), and must be open to learning more about financial analysis, a critical fundamental language of urban development. Pat Connolly was a housing specialist for Commonbond Housing, and is now the director of housing development for Lutheran Social Services.

URBS 3900 Urban Studies Internship Seminar
A-F only, 2 credit(s), max credits 4; prereq Sr, internship placement, dept consent, instr consent;
Instructor: Pentel, Paula R
Description: Student may contact the instructor or department for information.

URBS 3955W Senior Paper Seminar
A-F only, 2 credit(s); prereq dept consent; Meets CLE req of Writing Intensive;
Instructor: Martin, Judith A
Description: This seminar is intended for urban studies seniors who are undertaking their senior papers. Methods and resources for research will be the focus and significant writing will be expected. Students will share experiences, work on drafts, and should expect to have a first draft completed well before the term. Students should have a paper proposal ready before taking the class (paragraph describing the paper) Judith Martin

URBS 3993 Urban Studies Directed Study
A-F only, 2-3 credit(s), max credits 6, 3 completions allowed; prereq UrbS majors, instr consent, dept consent;
Instructor: STAFF
Description: For students with a specific educational objective that cannot be satisfied through regular curriculum (e.g., foreign study) and for honors students to complete an honors opportunity.

Veterinary Clinical Sciences
C-339 Veterinary Teaching Hospital

VCS 4600 Small Animal and Equine Behavior
A-F only, 3 credit(s);
Instructor: Fonseth, Sherry
Description: Topics covered will include the basics of normal animal behavior in dogs, cats, horses and wolves. Principles of learning theory and the applications in animal training will be covered in depth. Other topics will include the development of animal behaviors (ethology), social and communication development, sexual behaviors, and genetics. Animal welfare, shelter animal behavior, legislation and abuse, and the human animal bond will be covered by various experts in their fields. Common behavioral problems in dogs, cats, and horses will be reviewed as well as approaches to prevent/treat them, including pre-purchase considerations, management, and housing.
Style: 80% Lecture, 10% Discussion, 10% Guest Speakers.
Grading: There will be three exams in this course, all equally weighted. For students hovering between two grades by less than or equal to 1%-age point, perfect attendance will boost the grade. Class participation is expected.
Exam Format: Multiple choice tests.

VCS 4992 Directed Readings in Veterinary Clinical Sciences
A-F only, 1-6 credit(s), max credits 12; prereq [One-page proposal, bibliography of works to be read] submitted to faculty;
Instructor: Modiano, Jaime
Description: Student may contact the instructor or department for information.

VCS 4993 Directed Study in Veterinary Clinical Sciences
A-F only, 1-6 credit(s), max credits 12; prereq One-page proposal submitted to faculty member;
Instructor: Modiano, Jaime
Description: Student may contact the instructor or department for information.

VCS 4994 Directed Research in Veterinary Clinical Sciences
A-F only, 1-6 credit(s), max credits 12; prereq One-page proposal submitted to faculty member;
Instructor: Modiano, Jaime
Description: Student may contact the instructor or department for information.

Veterinary Medicine, Graduate
455 Veterinary Teaching Hospital

VMED 5080 Problems in Veterinary Epidemiology and Public Health
A-F only, 1-3 credit(s), max credits 3, 1 completion allowed;
Instructor: Bender, Jeff Blaine
Description: Student may contact the instructor or department for information.

VMED 5190 Seminar and Presentation Development
S-N only, 2 credit(s); prereq Grad student;
Instructor: Godden, Sandra Michele
Description: Student may contact the instructor or department for information.

VMED 5210 Advanced Large Animal Physiology I
1-3 credit(s), max credits 6;
Instructor: Malone, Erin
Description: This is the first part of a two semester course. The sections are independent. Together the courses are designed to provide a strong foundation in the normal physiology of large animal species that will allow participants to better evaluate and understand the pathophysiology of diseases and conditions.
affecting large animal species. The course will be offered once every three years. Course objectives: 1. To cover topics in large animal physiology, including sports physiology 2. To correlate material with pathophysiology as observed in texts and journals.

**VMED 5232 Comparative Clinical Veterinary Dermatologic Pathology**
- S-N only, 1 credit(s); max credits 2; prereq DVM degree or foreign equival.;
- Instructor: Torres, Sheila Mello
- **Description:** Student may contact the instructor or department for information.

**VMED 5240 Advanced Small Animal Pathobiology I**
- A-F only, 1 credit(s); prereq CVM grad student, [DVM or foreign equival] degree;
- Instructor: Patterson, DVM, Ned
- **Description:** Student may contact the instructor or department for information.

**VMED 5295 Problems in Large Animal Clinical Medicine/Surgery and Theriogenology**
- A-F only, 1 credit(s), max credits 3, 3 completions allowed; prereq VMed grad student, possess DVM;
- Instructor: Valberg, Stephanie J
- **Description:** Student may contact the instructor or department for information.

**VMED 5310 Topics in Veterinary Clinical Pathology**
- S-N only, 1 credit(s), max credits 2; prereq Grad student in CVM;
- Instructor: Sharkey, Leslie Carol
- **Description:** Student may contact the instructor or department for information.

**VMED 5319 Veterinary Gross Pathology**
- S-N only, 1 credit(s), max credits 3, 3 completions allowed; prereq Grad student in CMB or [VMED, [DVM degree or foreign equivalent], college consent];
- Instructor: Wunschmann, Arno
- **Description:** Student may contact the instructor or department for information.

**VMED 5320 Advanced Veterinary Systemic Pathology I**
- A-F only, 3 credit(s); prereq Grad student in VMED or [CMB, [DVM degree or foreign equival]] or instr consent;
- Instructor: Carlson, Cathy Sue
- **Description:** Student may contact the instructor or department for information.

**VMED 5330 Veterinary Descriptive Histopathology**
- 1 credit(s), max credits 2; prereq Grad student in VMED or [CMB, [DVM degree or foreign equival]] or instr consent;
- Instructor: Armien, Anibal Guillermo
- **Description:** Student may contact the instructor or department for information.

**VMED 5410 Scientific Writing and Speaking**
- A-F only, 2 credit(s); prereq Grad student in health sciences;
- Instructor: Goyal, Sagar M
- **Description:** Student may contact the instructor or department for information.

**VMED 5430 HIV/AIDS: Pathogenesis, Treatment, and Prevention**
- OPT No Aud, 1 credit(s); prereq Grad student;
- Instructor: Molitor, Thomas William
- **Description:** Student may contact the instructor or department for information.

**VMED 5496 Training in Swine Production and Management**
- S-N only, 4 credit(s); prereq VMed grad student or instr consent;
- Instructor: Dee, Scott Allen
- **Description:** Student may contact the instructor or department for information.

**VMED 5594 Research in Veterinary Medicine**
- 1-4 credit(s), max credits 8; prereq Jr, instr consent;
- Instructor: Srieevatsan, Srinand
- **Description:** Student may contact the instructor or department for information.

**VMED 5670 Bovine Surgery Practicum**
- S-N only, 2 credit(s); prereq [VMed grad student, [DVM or foreign degree]] or instr consent;
- Instructor: Malone, Erin
- **Description:** This two week intensive course is designed to provide training in ruminant surgery to VMC graduate students and DVMs. The course is unusual in format from most veterinary curriculum offerings and provides an in-depth evaluation of food animal surgery principles as well as hands on laboratory components to solidly understanding of the material. Course goal(s): Provide training in ruminant surgery Objectives: Course objectives: 1. To review basic and advanced ruminant surgery principles, including diagnostics and corresponding medical management, in lecture format 2. To practice principles of ruminant surgery in a variety of laboratory formats, including small animal procedures.
- **Style:** 40% Lecture, 50% Laboratory, 10% Student Presentation.
- **Grading:** 20% reports/papers, 20% special projects, 20% in-class presentation, 20% class participation, 20% laboratory evaluation.

**VMED 5994 Advanced Clinical Epidemiology**
- A-F only, 1 credit(s);
- Instructor: Wells, Scott J
- **Description:** Student may contact the instructor or department for information.

**VMED 8134 Ethical Conduct of Animal Research**
- A-F only, 3 credit(s); prereq [Grad or professional school] student or instr consent; Credit will not be granted if credit has been received for: ANSC 8134;
- Instructor: Molitor, Thomas William
- **Description:** Student may contact the instructor or department for information.

**VMED 8201 Advanced Small Animal Veterinary Medicine**
- A-F only, 1-5 credit(s), max credits 5, 1 completion allowed; prereq instr consent;
- Instructor: Polzin, David J
- **Description:** Student may contact the instructor or department for information.

**VMED 8202 Internal Medicine in Small Companion Animals**
- A-F only, 1-3 credit(s), max credits 3, 1 completion allowed; prereq instr consent;
- Instructor: Polzin, David J
- **Description:** Student may contact the instructor or department for information.

**VMED 8203 Advanced Diagnosis and Therapeutics of Animal Disease**
- A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prereq instr consent;
- Instructor: Osborne, Carl A

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Description: Student may contact the instructor or department for information.

VMED 8210 Seminar: Veterinary Medicine
1 credit(s); prereq instr consent;
Instructor: Valberg, Stephanie J
Description: Student may contact the instructor or department for information.

VMED 8220 Advanced Nephrology/Urology Clinics
1-3 credit(s), max credits 3, 1 completion allowed; prereq instr consent;
Instructor: Polzin, David J
Description: Student may contact the instructor or department for information.

VMED 8230 Medical Conference
1-3 credit(s), max credits 3, 1 completion allowed; prereq instr consent;
Instructor: Lulich, PhD, Jody P
Description: Student may contact the instructor or department for information.

VMED 8292 Journal Club: Large Animal Internal Medicine
A-F only, 1 credit(s), max credits 3, 3 completions allowed; prereq instr consent;
Instructor: Valberg, Stephanie J
Description: Student may contact the instructor or department for information.

VMED 8293 Advanced Studies in Nephrology and Urology
A-F only, 1-3 credit(s), max credits 3, 1 completion allowed; prereq instr consent;
Instructor: Lulich, PhD, Jody P
Description: Student may contact the instructor or department for information.

VMED 8394 Research in Veterinary Medicine
1-3 credit(s), max credits 3, 1 completion allowed; prereq instr consent;
Instructor: Sreevatsan, Srinand
Description: Student may contact the instructor or department for information.

VMED 8396 Diagnostic and Therapeutic Techniques of Animal Diseases
1-3 credit(s), max credits 6, 6 completions allowed; prereq DVM student, vet med student, instr consent;
Instructor: Valberg, Stephanie J
Description: Student may contact the instructor or department for information.

VMED 8492 Seminar: Infectious Diseases and Swine Medicine
1 credit(s), max credits 2;
Instructor: Molitor, Thomas William
Description: Student may contact the instructor or department for information.

VMED 8530 Advanced Swine Diseases
2 credit(s);
Instructor: Joo, Han Soo
Description: Student may contact the instructor or department for information.

VMED 8592 Infectious Disease Journals: Critical Thinking
1 credit(s);
Instructor: Dee, Scott Allen
Description: Student may contact the instructor or department for information.

VMED 8780 Advanced Avian Critical Care: Principles and Procedures
A-F only, 2 credit(s); prereq Course each in vet pathology, physiology, pharmacology, anatomy, small animal anesthesiology and critical care;
Instructor: Redig, Patrick Thomas
Description: Student may contact the instructor or department for information.

VMED 8793 Seminar: Veterinary Anesthesiology
A-F only, 1-2 credit(s), max credits 2, 1 completion allowed; prereq [CVM 6321 or equiv], DVM degree;
Instructor: Graham DVM, Lynelle
Description: Student may contact the instructor or department for information.

Water Resources Science
173 McNeal Hall

WRS 5241 Ecological Risk Assessment
3 credit(s); prereq instr consent;
Instructor: Andow, David
Description: Student may contact the instructor or department for information.

WRS 8100 Interdisciplinary Seminar in Water Resources
0.5-3 credit(s), max credits 3, 3 completions allowed;
Instructor: Nieber, John Little
Description: Student may contact the instructor or department for information.

Work and Human Resource Education
330 Wulling Hall

WHRE 2711 Societies of the Future: Changing Work Contexts
A-F only, 3 credit(s); Meets CLE req of Technology and Society;
Instructor: Harkins, Arthur M
Description: COURSE DESCRIPTION This course provides basic, personalized experiences with the evolution of technology, social contexts and work, with special emphasis on conditions likely to be encountered within the near future. The course repurposes fundamental liberal arts content as effective components of decision-making processes set in short, medium-, and long-range social and work trends and projections. In this course, students and instructors will consider a wide range of technologies, all the way from the basic American highway system to the latest developments in the Cloud. Throughout this consideration, students will be guided in the exploration and analysis of the implications and choices around development, adoption and use of these technologies. Of particular importance is the role of context, control, and ambiguity, and how these each influence our interactions and uses of technologies. Through course readings, in-class discussions, weekly reflection papers, and group projects, over the course of the semester, students will work towards the articulation of a more formal framework for the evaluation of technologies. Such a framework will center around critical questions that we will ask ourselves and each other in class and in writing. We will be looking at technology and particularly the future of technology at work, but through the lens of the questions and queries raised by the liberal arts.
STATEMENT OF COURSE OBJECTIVES Upon completion of the course, students will be able to: Understand what liberal education is, with a particular focus on technologies of the future and work of the future, and understand what this means for them as students and as citizens; Describe the rapidly evolving social (economic, political, cultural and technological) circumstances
within which work changes, and explore the ethical aspects of these possible changes; Connect knowledge and practice when explaining the study of the future as a trans-disciplinary field, a professional field, and a highly customizable intellectual technology; Consider the impact of technology from multiple perspectives that include developers, users/consumers, as well as others in society; Discuss the history of human societies, with particular emphasis upon technological evolution and implications for the world of work. Emphasize the importance of alternative perspectives when considering future social and work patterns, and develop skills in constructing a framework for evaluating conflicting views of exiting or emerging technologies; Describe the explosive development of human capital, and the risks of institutional lag; Explain how future-oriented personal development can contribute to improved organizational effectiveness in the face of change; and Discuss the selective personalization of proactive responses to forces shaping human capital developing in the 21st century.

WHRE 5001 Survey: Human Resource Development and Adult Education
3 credit(s); prereq Grad student only;
Instructor: Peterson, Shari L
Description: Course Description WHRE 5001 is an overview of the ways in which Human Resource Development (HRD) and Adult Education (AdEd) overlap as well as the unique dimensions of both fields. The foci are (a) application of theory to practice, (b) integration of the two fields, and (c) critical thinking. Course Objectives Through individual and group activity and discussion, students have an opportunity to: 1. Understand the systems theory that frames the context for studying various fields; 2. Identify AdEd theories and ways they inform educational and HRD practice; 3. Identify HRD theories and ways they inform human resource development and AdEd practice; 4. Engage in dialog focused on readings and issues in HRD and AdEd; 5. Enhance critical thinking and writing skills.

WHRE 5697 Teaching Internship: School and Classroom Settings
2 credit(s); prereq 5696 for initial licensure program;
Instructor: Cudworth, Rachel Beth
Description: Student may contact the instructor or department for information.

WHRE 5901 Using Research in Work and Human Resource Education
3 credit(s); prereq Grad student only;
Instructor: Twoghi, Catherine Carol
Description: Student may contact the instructor or department for information.

WHRE 8001 Advanced Theory in Human Resource Development and Adult Education
A-F only, 3 credit(s); prereq 5001 or AdEd 5001;
Instructor: Archidick, Alexandre A
Description: Critical assessment and development of human resource development (HRD) and adult education (AE) theories and discussion of the role of theory in addressing practical demands placed upon individuals and organizations. COURSE OBJECTIVES: By the end of this course students will be able to: 1. Develop an understanding of the philosophical foundations of theory and theory development; 2. Familiarize themselves with the current approaches to social science research and theory-building; 3. Examine different perspectives of research and theory-building; 4. Develop critical thinking skills necessary to understand, interpret, and evaluate research and theory in human resource development and adult education; 5. Identify, compare and critique some current theories and theory-building methodologies; 6. Construct a HRD or AE theory (or conceptual framework) in a particular area of professional interest; 7. Critically review the literature of theory and research in a particular area of study; 8. Become part of a community of scholars and contribute to the viability and productivity of this community; 9. Recognize personal barriers to effective academic writing, and develop a strategy for overcoming these barriers. METHODS OF INSTRUCTION: The course will primarily utilize seminars, scholarly dialogue, and written assignments. The instructor's main role is to facilitate learning, lead discussions, and share knowledge and resources.

WHRE 8912 Quantitative Research In Work and Human Resource Education
3 credit(s); prereq 8911;
Instructor: Brown PhD, James M
Description: Student may contact the instructor or department for information.

WHRE 8915 Ethics and Responsible Research
A-F only, 1 credit(s);
Instructor: Brown PhD, James M
Description: Student may contact the instructor or department for information.

WHRE 8990 Research Seminar
S-N only, 1 credit(s), max credits 6, 6 completions allowed; prereq 8911, [8912 or 8913 or 8914] or dept consent;
Instructor: Brown PhD, James M
Description: Student may contact the instructor or department for information.

Writing Studies
180 Wesbrook Hall

WRIT 1201 Writing Studio
A-F only, 4 credit(s); prereq Placement in Writ 1201; Credit will not be granted if credit has been received for: PSTL 1421;
Instructor: STAFF
Description: WRIT 1201 introduces students to general writing strategies encountered at the college level. Through frequent practice and feedback, students learn to see writing as a tool for learning and a vehicle for expression of ideas and informed views. Students also learn a working vocabulary for discussing writing. Typical assignments include informal writing derived from personal experience, response to readings, analysis and evaluation of sources on the web and in print, and formal papers that increasingly make use of sources as well as close reading of texts. The course emphasizes the active practice of writing, from gathering ideas for a paper, through the drafting of papers, to careful editing. Many sections meet in computer classrooms. Some sections are designated for non-native speakers and are joined to other learning community courses. This course does NOT meet the first-year writing requirement. Style: 10% Lecture, 15% Discussion, instructor-directed practice of writing related to papers
Grading: 80% reports/papers, 20% class participation.
Percentages may vary slightly by section. Class participation includes required in-class writing

WRIT 1301 University Writing
A-F only, 4 credit(s); prereq Placement in Writ 1301 credit will not be granted if credit already received for freshmen composition courses under the following former designators: ENGC 1011, ENGC 1011H, ENGC 1012, ENGC 1012H, ENGC 1013, ENGC 1013H, ENGC 1014, ENGC 1014H, ENGC 1015, ENGC 1016, RHET 1101; Credit will not be granted if credit has been received for: WRIT 1011;
Instructor: STAFF
Description: WRIT 1301 fulfills the first-year writing requirement. It involves critical reading, writing, and thinking as students practice some of the types of writing they may expect in their college career such as summaries, essays, academic arguments, bibliographies, and papers built on research. The course helps students develop, at a minimum, an approach to writing that relies on clear statement of a thesis and support of that thesis with appropriate sources and documentation. Time is spent discussing rhetorical elements of writing such as audience, purpose, and argumentative structure. Students also practice steps in the writing process such as invention, research,
organization of ideas, paper drafting, revision, and editing. Students report, synthesize, and draw conclusions regarding the significance of what they read. Students become more aware of the rhetorical choices available to them and learn to make appropriate choices. Some sections may be taught in computer classroom. Some sections are offered online. Some sections may include a service-learning component.

**Style:** 10% Lecture, 35% Discussion. Instructor-directed work on writing assignments, including one-to-one conferences.

**Grading:** 80% reports/papers, 20% class participation. Percentages may vary slightly by section. Class participation includes required in-class writing.

**WRIT 1401 Writing and Academic Inquiry**
A-F only, 4 credit(s); prereq Placement in Writ 1401 credit will not be granted if credit already received for freshmen composition courses under the following former designators: ENGC 1011, ENGC 1011H, ENGC 1012, ENGC 1012H, ENGC 1013, ENGC 1013H, ENGC 1014, ENGC 1014H, ENGC 1015, ENGC 1016, RHET 1101; Credit will not be granted if credit has been received for: WRT 1101; Instructor: STAFF

Description: WRIT 1401 fulfills the first-year writing requirement. It challenges students to think strategically about developing and communicating ideas within different contexts. Students examine increasingly challenging texts as they apply their writing processes, with feedback from the instructor and peers, in order to craft thesis-driven academic analyses and arguments. Students master the concepts of audience, purpose, and context to demonstrate effective communication both for and beyond an academic audience. Classroom activities include discussion of readings, peer review, informal writing assignments. Students craft focused thesis statements that articulate a clearly reasoned position and use credible evidence to support a sustained argument. Through guided practice, students refine their control over focus, organization, style, diction, and grammar, and use the revision process to achieve their writing goals. Students use University libraries to locate, evaluate, and apply scholarly sources. Some sections may focus on writing with and for new media. Some sections may include a service-learning component.

**Style:** 10% Lecture, 35% Discussion. Instructor-directed work on writing assignments, including one-to-one conferences.

**Grading:** 80% reports/papers, 20% class participation. Percentages may vary slightly by section. Class participation includes required in-class writing.

**WRIT 1511 Writing Studio I**
A-F only, 1 credit(s); prereq Only Rochester-admitted students will be able to enroll in this course.; Instructor: Taniguchi,Yuko

Description: Student may contact the instructor or department for information.

**WRIT 1908W Topics: Freshman Seminar**
A-F only, 3 credit(s); prereq Fr; Meets CLE req of Civic Life and Ethics; meets CLE req of Writing Intensive; Instructor: Bruch Jr,Patrick Leonard

Description: This seminar will introduce students to the intellectual projects of studying and participating in higher education as a participatory institution by inviting students into critical dialogue with past, present, popular, and academic, representations of higher education and its civic purposes. We will examine the shifting role of the university in public life and the roles that students and other constituencies have played in shaping the character of higher education through writing and other activities. Designed specifically for first-year students, the course will combine academic skill building with personal and collective reflection on the actual and possible purposes and values of higher education for individuals and the society.

**WRIT 1910W Topics: Freshman Seminar**
3 credit(s); prereq Fr; Meets CLE req of Writing Intensive; Instructor: Ross Jr,Donald

Description: (Un)settling the U.S. West from the Revolution to Indian removal in the 1830s in the six decades after 1776, over four million (white) Americans migrated from the East coast to the Ohio and Mississippi river valleys. There they found dozens of Native American nations that had been in place for centuries, and they used a combination of treaties and (rarely) military conflicts to displace the Native Americans to the west of the Mississippi river. This seminar will combine travel accounts that preceded white settlement, statements of public policy, settlers' narratives and poetry, and the few texts by Native Americans to figure out what people on the frontier thought was happening. There will be a CourseLib page at the Library.

**WRIT 3001 Introduction to Scientific and Technical Communication**
A-F only, 2 credit(s);
Instructor: STAFF

Description: Research origins/history. Defining technical communication in professional world. Focuses on audience, purpose, ethics, global communication, and collaboration. Journal articles, student/professional organizations, guest presentations, interviews. Career assessment inventories, in-class/electronic discussions, oral presentations, feasibility report.

**WRIT 3029W Business and Professional Writing**
3 credit(s); Credit will not be granted if credit has been received for: ENGL 3029W; Meets CLE req of Writing Intensive;
Instructor: STAFF

Description: Practice writing for various professional purposes/audiences, using appropriate styles, tones, and organizational elements. Potential genres include proposals, reports, web content, email, executive summaries, job search portfolios. Attention to workplace collaboration and broader issues of professional literacy.

**WRIT 3101W Writing Arguments**
A-F only, 3 credit(s); prereq Soph or jr or sr; Meets CLE req of Writing Intensive;
Instructor: STAFF

Description: Student may contact the instructor or department for information.

**WRIT 3152W Writing on Issues of Science and Technology**
A-F only, 4 credit(s); prereq credit will not be granted if credit already received for: Writ 1152W;
Instructor: STAFF

Description: Ethical, social, and political challenges created by science/technology. Analyzes persuasion strategies through which experts, political decision-makers, and citizens meet these challenges. Bioscience controversies such as cloning, organ transplantation. Controversies over pollution, ozone depletion.

**WRIT 3152W Writing on Issues of Science and Technology**
A-F only, 4 credit(s); prereq credit will not be granted if credit already received for: Writ 1152W;
Instructor: Berkenkotter,Carol Ann

Description: Students read books and articles, discuss, and write about a major issues in science and technology. Instructors chose different topics which can include: DNA and the Human Genome; Animal/Human interaction; Global Warning; Alternative Energies; Human Disease and Stem-Cell Research; Vaccines from Smallpox to AIDS, Why Civilizations Collapse, etc. This course is for non-specialists.

**WRIT 3221W Communication Modes and Methods**
4 credit(s); prereq Credit will not be granted if the student has already completed Rhet 3221W Soph or jr or sr; Meets CLE req of Writing Intensive;
Instructor: Berkenkotter,Carol Ann

Description: Student may contact the instructor or department for information.

**WRIT 3291 Independent Study**
1-3 credit(s), max credits 6; prereq instr consent , dept
WRIT 3381W Writing and Modern Cultural Movements
A-F only, 3 credit(s); meets CLE req of Arts/Humanities; meets CLE req of Writing Intensive;
Instructor: Reynolds, Thomas Joseph
Description: Student may contact the instructor or department for information.

WRIT 3441 Editing, Critique, and Style
A-F only, 3 credit(s); prereq Soph or jr or sr;
Instructor: Schuster, Mary Lay

WRIT 3511 Communication Methods
A-F only, 3 credit(s); prereq Writ 1512 or instr consent;
Instructor: Bruenger, Aaron Michael
Description: Student may contact the instructor or department for information.

WRIT 3562W Technical and Professional Writing
A-F only, 4 credit(s); prereq Jr or sr or instr consent; Meets CLE req of Writing Intensive;
Instructor: STAFF
Description: Written/oral communication in professional settings. Gathering information, analyzing audience, assessing conventional formats. Drafting, testing, revising documents. Oral presentation of final reports.

WRIT 3577W Rhetoric, Technology, and the Internet
A-F only, 3 credit(s); prereq Soph or jr or sr or instr consent; Meets CLE req of Technology and Society; meets CLE req of Writing Intensive;
Instructor: Logie, John
Description: Student may contact the instructor or department for information.

WRIT 3671 Visual Rhetoric and Document Design
A-F only, 3 credit(s); prereq Jr or sr;
Instructor: Horvath, Barbara Ann
Description: In this course, students learn a system for analyzing and applying principles of visual rhetoric for various media. Topics include examining and applying visual strategies to design projects, reader perception, exploring software applications, typography, and data displays.

WRIT 3751W Seminar: Theory and Practice of Writing Consultancy
4 credit(s); prereq Currently working in a University writing center, instr consent credit will not be granted if credit received for: 3607; Meets CLE req of Writing Intensive;
Instructor: Jamsen, Kirsten
Description: This course is a seminar in the theory and practice of teaching writing through one-to-one consultations. Fundamentally, we will assume that writing is a process with many stages, not one simple end product, and that all writers, no matter how successful, can benefit from receiving thoughtful feedback and engaging in serious revision of their writing. In this course, not only will you learn to be a successful writing consultant, but you will also become more aware of your own writing process and learn to apply a variety of writing and reading strategies. Ideally, you'll leave this course having grown as both a writer and a writing consultant! And together we will have built a community that supports your teaching and learning. This course is writing-intensive, which means it involves regular informal and formal writing assignments with instructor feedback and completion of at least 10 pages of polished formal writing. You will produce at least 16, but more likely 20, pages of polished writing and will engage in extensive?indeed radical?!review of three formal papers. Because writing and the teaching of writing are the focus of this course, we will spend significant time in class discussing your writing and that of your classmates. Just like your work as a consultant, this course is built on the ethic of peer collaboration. In all aspects of the course, you will be both teachers and learners at the same time. Together, we will explore theories of literacy and teaching writing, asking such questions as?: How do writers learn to write? How is writing taught in the academy? Why? How do rhetorical conventions and views of literacy vary across disciplines? How is writing influenced by a writer's experiences and culture? How does technology influence the writing process? How do race, class, and gender inform writing and the teaching of writing? How, and why, does writing consulting work? In addition to challenging you to think critically about both writing and the teaching of writing, this course will also help you develop concrete consulting strategies. Through mock conferences, reflective exercises, and collaborative problem-solving sessions, we will consider how consultants can conduct successful one-to-one conferences with students from a variety of disciplines, backgrounds, and experiences.
Style: 45% Discussion, 35% Small Group Activities, 15% Student Presentation, 5% Guest Speakers.
Grading: 40% reports/papers, 40% special projects, 10% journal, 10% class participation.

WRIT 4196 Internship in Scientific and Technical Communication
A-F only, 3 credit(s); Meets CLE req of Technology and Society; meets CLE req of Writing Intensive;
Instructor: STAFF
Description: Internships sites may include the University, industry, or government agencies. Internship proposal, progress report, internship journal (optional), final report with letter from internship supervisor.

WRIT 4501 Usability and Human Factors in Technical Communication
3 credit(s); prereq Jr or sr or grad student or instr consent;
Instructor: Breuch, Lee-Ann Kastman
Description: Principles/concepts of human factors/usability testing. Developing objectives, criteria, and measures. Conducting tests in lab, field, and virtual environments. Using software programs to analyze qualitative/quantitative data. Lab fee of $40 required for use of the Usability Services Laboratory to conduct usability projects.
Style: 20% Lecture, 20% Discussion, 50% Small Group Activities, 10% Guest Speakers.

WRIT 5001 Introduction to Graduate Studies in Scientific and Technical Communication
A-F only, 3 credit(s); prereq Grad student or instr consent;
Instructor: Longo, Bernadette
Description: This course introduces students in Scientific & Technical Communication and graduate students in related fields to issues in the field of scientific & technical communication, such as professional code of practice, audience analysis, media selection, international communication, legal concerns, usability, and issues specific to fields such as medicine, information design, or computer development. Issues may change from semester to semester. Recommended for students in their first semester or two of graduate coursework.
Style: 20% Lecture, 30% Discussion, 20% Small Group Activities, 10% Student Presentation, 10% Guest Speakers, 10% Web Based, in-class groups
Grading: 20% mid exam, 30% final exam, 30% reports/papers, 20% in-class presentation.
Exam Format: essay

WRIT 5051 Graduate Research Writing Practice for Non-native Speakers of English
3 credit(s); prereq Grad student;
Instructor: Holt, Sheryl Lynn
Description: Graduate-level writing techniques/formats for summaries, critiques, research, and abstracts. Persuasion, documentation, structure, grammar, vocabulary, field-specific requirements. Writing through several drafts, using mentor in specific field of study. Revising/editing to meet graduate requirements. Three one-hour conferences with mentor. Seminar (x credit(s) per quarter). University of Minnesota - Course Guide for Twin Cities Campus Fall 2011

This information is accurate as of 3/14/2011 at 11:00 PM and is subject to change. Access the most current information in the online Course Guide at http://onestop.umn.edu. IMPORTANT: Before you attend the first class, verify the room location in the online Class Schedule.
WRIT 5051 Graduate Research Writing Practice for Non-native Speakers of English
3 credit(s); prereq Grad student;
Instructor: Strain,Kimberley Ann
Description: WRIT 5051 is designed to help you with the types of scholarly writing you need to do in graduate school. The assignments utilize much of the writing you are already doing for coursework, field-specific articles you are reading for your graduate courses, and research you are already conducting to help you write up the work in an acceptable and polished form. The writing areas in this course focus on rhetorical position, definition of audience, presentation of theory, critiquing, and summarizing techniques. For research writing, we practice integrating secondary sources using paraphrasing, quoting, and documentation techniques that are acceptable at a U.S. university. The assignments may include summaries, critiques, abstracts, proposals, and parts of a thesis or dissertation. Particular attention will be given to clarity of grammar, sentence structure, clarity of expression, use of formal, academic language, and other cultural issues in your drafts.
Style: 20% Lecture, 25% Discussion. 45% Instructor-directed work on writing activities and assignments.
Grading: 80% reports/papers, 20% class participation. Percentages may vary slightly by section.

WRIT 5052 Graduate Research Presentations and Conference Writing for Non-Native Speakers of English
3 credit(s); prereq [Grad student, non-native speaker of English] or instr consent ;
Instructor: Holt,Sheryl Lynn
Description: WRIT 5052 helps you learn and practice strategies and specific skills for effective delivery of professional, graduate-level presentations to a U.S. audience. The course systematically and sequentially exposes you to the major principles and features of American professional presentations and provides ample opportunities to practice the language and content to most effectively deliver a dynamic presentation. This course uses an action-learning approach with a heavy emphasis on self-assessment and skill building through video demonstrations, videotaping, and coaching. Individual instruction and feedback will be given on videotaped (DVD) presentations and audio taped pronunciation exercises, as needed. Regular attendance, oral participation in classroom presentations and activities, written self-feedback and correction, and informal, impromptu presentations are expected. In addition, some exercises will be assigned for individual practice for accent reduction, as needed. Students select their own field-specific topics for the presentations according to their areas of research or interests. Presentation practice may include skills for persuasive, topic-based, and research-based presentations. Limited discussion will also include writing abstracts for conferences and other writing related to professional presentations. Pronunciation activities and delivery strategies will be specific to non-native speakers of English including cultural analysis, audience awareness, cultural based delivery techniques, enunciation, stress and rhythm, pacing, volume, and non-verbal communication (eye contact, gestures, facial expressions).
Style: 35% Lecture, 35% Discussion. 65% Instructor-directed work on presentation activities and assignments including in-class presentations.
Grading: 10% written homework, 60% in-class presentation, 30% class participation. Percentages may vary slightly by section.

WRIT 5196 Internship in Scientific and Technical Communication
S-N only, 3-6 credit(s), max credits 6, 1 completion allowed; prereq STC grad or instr consent ;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

WRIT 5291 Independent Study, Reading, and Research
1-3 credit(s), max credits 3, 1 completion allowed; prereq instr consent , dept consent ;
Instructor: STAFF
Description: Student may contact the instructor or department for information.

WRIT 5531 Introduction to Writing Theory and Pedagogy
A-F only, 3 credit(s); prereq Graduate student;
Instructor: Bruch Jr,Patrick Leonard
Description: Pedagogical philosophy/methodology in composition, primarily first-year writing. Introduction to theories underlying teaching/tutoring with technology.

WRIT 5671 Visual Rhetoric
A-F only, 3 credit(s); prereq Jr or sr or grad student;
Instructor: Logie,John
Description: Range/development of visuals, especially those in science/technology. Vocabulary for commenting on, criticizing, and creating visuals.

WRIT 5776 Major Figures in Rhetorical Tradition: Modern Era
A-F only, 3 credit(s);
Instructor: Greene,Ronald Walter
Description: Student may contact the instructor or department for information.

WRIT 8012 Applied Research Methods in Writing Studies and Technical Communication
A-F only, 3 credit(s), max credits 6; prereq [8011, grad student] or instr consent ;
Instructor: Haas,Christina
Description: Student may contact the instructor or department for information.

WRIT 8520 Seminar in Scientific and Technical Communication
A-F only, 3 credit(s), max credits 12, 4 completions allowed;
Instructor: Longo,Bernadette
Description: Student may contact the instructor or department for information.

WRIT 8540 Seminar in Technical Communication and Composition Pedagogies
A-F only, 3 credit(s), max credits 12, 4 completions allowed;
Instructor: Reynolds,Thomas Joseph
Description: Student may contact the instructor or department for information.

Youth Development and Research
190 Peters Hall

YOST 2101 Urban Youth and Youth Issues
4 credit(s); prereq 1001 or instr consent ;
Instructor: STAFF
Description: Young people in cities around the world are visible objects of interest, concern, and often fear. Their presence makes age noticeable, and often their clothing, hairstyles, body posture, race/ethnicity, and language serve to set them apart, as if they were an alien group, and not our siblings, children or the employee who serves us at a fast food restaurant or helps care for our (grand) parents in a nursing home. In cities, all is compressed and space is more than air or land; it is opportunity, somehow shaping what we do, with whom, how and when. The geography of youth ? of how space influences being a teenager is a critical area of study for those interested in the everyday lives of young people. What happens in space ? at sites, venues, places ? is crucial and when there is ?more? and all is compressed into an area, much happens ?between and among? ? lots ?goes on,? and this too is our interest. The history of adult interest in and concern about and fear of young people is largely the story of urban young people, and it is this history in which our knowledge is grounded. Obviously, there is more than ?more? at work. ?Urban youth? is used (too) often as a code for social class and race and ethnicity; ?city? has continued to mean
YOST 2241 Experiential Learning  
4 credit(s); prereq [1001, 2001] or instr consent ; Credit will not be granted if credit has been received for: YOST 5241;  
Instructor: STAFF  
Description: “The best thing for being sad,” replied Merlyn, “...is to learn something. That is the only thing that never fails. You may grow old and trembling in your anatomies, you may lie awake at night listening to the disorder of your veins, ... you may see the world around you devastated by evil lunacies, or know your honor trampled in the sewers of base minds. There is only one thing for it then - to learn. Learn why the world wags and what wags it. That is the only thing which the mind can never exhaust, never alienate, never be tortured by, never fear or distrust, and never dream of regretting. Learning is the thing for you.” T.H. White, The Once and Future King  
Youth work is often described as 'highly experiential' and transformative. But what does that really mean? What is learning? What makes something transformative? When is learning emancipatory? When is it oppressive? Youth workers understand, sometimes intuitively, that 'learning by doing' makes sense, but why? What does 'doing' really mean? What is learned in youth work? What should be learned? Is all experience equally valid, moral, and educative? What is the difference between active learning and experiential learning? This course will explore the wide range of definitions given to experiential learning and will lay a sound theoretical foundation for understanding it, particularly in the practice of youth work and the field of youth studies. Students will practice applying experiential learning theory across contexts, paying particular attention to culture, class, geography, age, and the formal to informal education continuum.

YOST 3291 Independent Study in Youth Studies  
1-8 credit(s), max credits 8; prereq instr consent ;  
Instructor: Stein, Jerome A  
Description: Student may contact the instructor or department for information.

YOST 3291 Independent Study in Youth Studies  
1-8 credit(s), max credits 8; prereq instr consent ;  
Instructor: Johnston-Goodstar PhD,Katie  
Description: Student may contact the instructor or department for information.

YOST 3291 Independent Study in Youth Studies  
1-8 credit(s), max credits 8; prereq instr consent ;  
Instructor: Baizerman,Michael Leon  
Description: Student may contact the instructor or department for information.

YOST 3291 Independent Study in Youth Studies  
1-8 credit(s), max credits 8; prereq instr consent ;  
Instructor: VeLure Roholt,Ross Ronald  
Description: Student may contact the instructor or department for information.

YOST 3291 Independent Study in Youth Studies  
1-8 credit(s), max credits 8; prereq instr consent ;  
Instructor: Baizerman,Michael Leon  
Description: Student may contact the instructor or department for information.

YOST 3291 Independent Study in Youth Studies  
1-8 credit(s); prereq [Upper div AdPy course, exper working with youth] or instr consent ;  
Instructor: STAFF  
Description: The course will provide participants with increased knowledge and practical skills to communicate sensitively and effectively with adolescents and their concerned persons about sexuality in everyday life. Participants will explore a variety of adolescent sexual issues with a focus on healthy adolescent sexual development and diversity. With this perspective as a base, other topics will include gender, body image, sexual values, sexual orientation, sex and cyberspace, laws effecting young people and their bodies, disease concerns, adolescent sexual victimology and offenderology, sexual harassment and professional and ethical boundaries in working with youth. Pertinent theory, research, strategies and experience will be reviewed using historical and contemporary readings, films, daily news media, guest speakers, and participant interaction in a safe, sensitive and even fun atmosphere. Note: This is not a course in human anatomy. It is a course examining the lived experience of young people as sexual beings. Nonetheless, every effort will be made to identify accurate anatomical and physiological language that complements the vernacular young people hear and use. Students will build a lexicon to facilitate talking about sexuality in a wide variety of cultural settings.

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