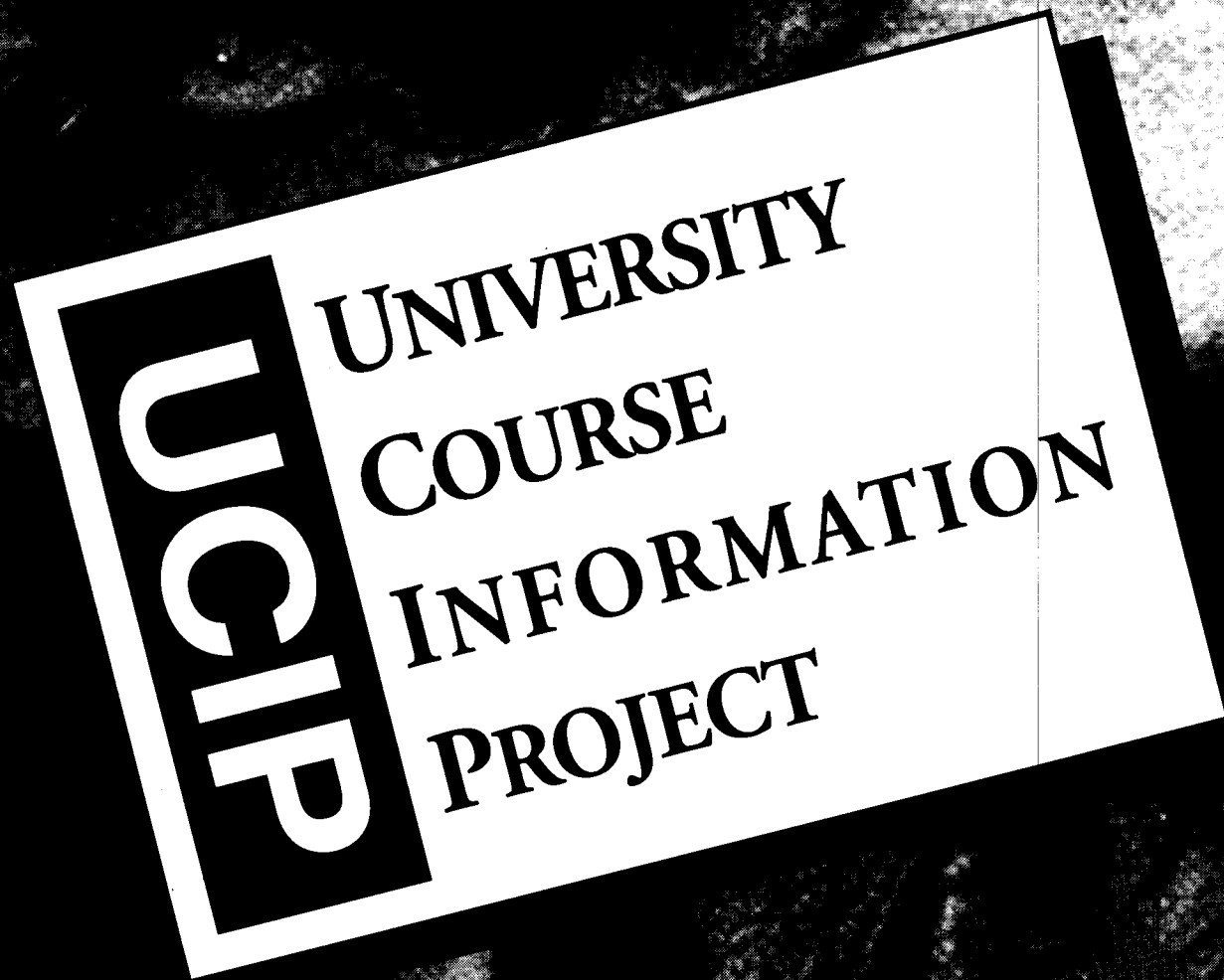


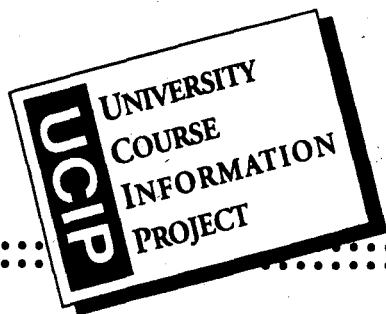
UNIVERSITY OF MINNESOTA

Course Information Guide  
Fall 1993



COLLEGE OF LIBERAL ARTS  
COLLEGE OF AGRICULTURE  
INSTITUTE OF TECHNOLOGY  
COLLEGE OF BIOLOGICAL SCIENCES  
CARLSON SCHOOL OF MANAGEMENT  
COLLEGE OF ARCHITECTURE AND LANDSCAPE ARCHITECTURE

University Course Information Project  
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Minneapolis, MN 55455  
625-9992



Dear Student,

The University Course Information Project is pleased to have published the guide to courses at the University of Minnesota taught during Fall quarter 1993. This edition of the guide would not have been possible except for the financial support of the of the following administrative offices, programs and student organizations.

*Office of the Vice President for Arts, Sciences and Engineering*  
*Minnesota Student Association*  
*Administrative Grants Program*  
*College of Liberal Arts Student Board*

While using the guide it is important to remember several things. The course information in the guide is subject to change. Instructors may change course requirements, content, assignments, and grading policies. Students must refer to the Class Schedules for the time that the class meets and the registration call number. Not all of the University's courses are listed; some courses did not have instructors assigned to teach them by the date of publication, other instructors were on leave from the University and couldn't be reached, and some instructors did not return any information on their courses.

As UCIP becomes more established, subsequent publications of the guide should include more courses. You can help in this regard by encouraging your professors to fill out the UCIP questionnaires. Be sure to look for the UCIP guide next quarter.

## **EQUAL OPPORTUNITY**

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status or sexual orientation.

**The University Course Information Project would like to extend its thanks to all those individuals whose support and hard work made this course guide possible**

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### **Prerequisites Key**

The symbols used for the prerequisites in the UCIP guide are the same as those used in the Class Schedule:

- ! 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.
- † All courses preceding this symbol must be completed before credit will be granted for any quarter of the sequence.
- § Credit will not be granted if credit has been received for the course listed after this symbol
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol
- # Registration Override Permit, completed and signed by the department offering the course, is required for registration.
- Δ Registration Override Permit, completed and signed by the instructor, is required for registration
- Registration Override Permit, completed and signed by the college offering the course, is required for registration.
- H Honors course (follows the course number)

### **Horse T. Morse - Minnesota Alumni Association Award for Outstanding Contributions to Undergraduate Education.**

This is given to professors from the Twin Cities and Coordinate Campuses who show outstanding contributions to undergraduate education. The winners receive \$2,500 cash and \$2,500 to his/her department each year for three subsequent years. Up to ten professors may win the award yearly. The Award is named after the former dean of the General College, Horse T. Morse, and the Alumni Association which helps fund the award.

### **The College of Liberal Arts Distinguished Teacher Award**

This award is given to two College of Liberal Arts Professors each year for their outstanding contributions to undergraduate education. Each Professor receives a one time cash award of \$ 2,000.

### **The Stanley Dagley Distinguished Teacher Award**

This award is given to faculty in the College of Biological Sciences for outstanding teaching. Each year one professor is chosen and is given a \$1,000 cash award.

### **The College of Agriculture Distinguished Teaching Awards**

Distinguished Teaching Awards were established in the College of Agriculture to recognize those members of the faculty who have made significant contributions to teaching. The Distinguished Teaching Award symbolizes the College of Agriculture's commitment of excellence in teaching. Two cash awards are presented annually, one to a non-tenured faculty with an award of \$1,000 and one to a tenured faculty member with an award of \$1,500.

### **Each course listing provides the following information:**

- Class time:** The instruction style as percentage of class time.
- Workload:** The number of pages of reading per week, the number of exams, the number of papers, and any other work assigned.
- Grade:** The percentage each type of assignment will count towards the final grade.
- Exam format:** The type of exam the instructor will give in the course.



## ACCOUNTING

### ACCT 1050 INTRODUCTION TO FINANCIAL REPORTING

(Sec 1-7) §8050; prereq 40 or more credits, 5 cr

Instructor: RAYBURN J

Dist Req: none

This is a class in Financial Accounting, often referred to as the language of business since it involves the fundamental concepts that are used in every form of conducting trade ranging from the financing of major capital projects to simply getting a small improvement loan from a local bank. The language of business is spoken everywhere and it is our job to reduce the degree that you are in need of a translator.

**Class time:** 70% lecture, 30% discussion

**Workload:**

**Grade:**

**Exam format:**

### ACCT 3001 INTRODUCTION TO MANAGEMENT ACCOUNTING

(Sec 1-4) prereq 1050, 4 cr

Instructor: SALY J

Dist Req: none

A broad overview of management accounting as the main information collection and analysis technology in an organization. Topics include cost concepts, cost allocation, activity-based costing, relevant costs for decision making and budgeting.

**Class time:** 70% lecture, 30% discussion

**Workload:**

**Grade:**

**Exam format:** problems, some short answer questions

### ACCT 5101 CORPORATE FINANCIAL REPORTING

(Sec 1) prereq 1050 or MBA 8030, MBA stu, 4 cr

Instructor: MUKHERJI A

Dist Req: none

The purpose of this course is to provide you with an understanding of the following: 1) the basic principles and procedures that accountants use in preparing financial statements about the financial condition, profitability or activities of an entity such as a corporation; 2) the relation between these accounting principles, procedures and reports and "economic reality"; 3) how alternative accounting methods affect financial statements; 4) the economic incentives for choosing different accounting methods. Text: Nikolai and Bazley "Intermediate Accounting" 5th edition.

**Class time:** 75% lecture, 25% discussion

**Workload:** 2 exams, 1 paper, reading varies 1-2 chapters per week

**Grade:** 40% mid-quarter exam(s), 45% final exam, 15% written reports/papers

**Exam format:** mainly problems

### ACCT 5102 ADVANCED FINANCIAL REPORTING I

(Sec 1-2) prereq 3101 or 5101, mgmt or grad mgmt student, 4 cr

Instructor: TRANTER T

Dist Req: none

Class is designed to extend students' understanding of the basic valuation problems encountered in financial reporting, with a primary focus on the valuation of liabilities. The course also extends the valuation issues to business combinations and consolidated financial reporting. Students are expected to understand the forces which motivate the transactions, the theory behind the accounting issues covered in the class, and the technical computations necessary to record the transactions in the financial statements. The work load is substantial. You can probably expect to spend 5-6 hours preparing for each class session. Because there is a definite correlation between study time and grades in Advanced Financial Reporting, avoid taking an excessive number of credits along with this class.

**Class time:** 100% lecture

**Workload:** 50 pages of reading per week, 3 exams, 1 paper, 1 problem, 1 extra for grads.

**Grade:** 40% mid-quarter exam(s), 40% final exam, 10% written reports/papers, 10% problem solving

**Exam format:** problems

### ACCT 5135 INCOME TAX ACCOUNTING

(Sec 1-2) prereq 1025 or 1050, 4 cr

Instructor: GUTTERMAN P

Dist Req: none

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.

**Class time:** 40% lecture, 30% discussion, 30% problems

**Workload:** 30 pages of reading per week, 3 exams

**Grade:** 45% mid-quarter exam(s), 45% final exam, 5% special projects, 5% class participation

**Exam format:** combination of multiple choice, short answer and short essay

### ACCT 5236 TAXATION II

(Sec 1-2) prereq 5135; for accounting majors only, 4 cr

Instructor: GUTTERMAN P

Dist Req: none

This course deals with the taxation of various legal entities. The objectives of the course are as follows: 1) to increase the student's knowledge and skills relating to tax research; 2) to introduce the student to the income tax laws governing the taxation of business income earned through a corporation or a partnership; 3) to introduce the student to the income tax laws related to the taxation of various owner-entity transactions (e.g. transfers of property to an entity and transfers of property from an entity); 4) to introduce the student to the manner in which wealth transfers are taxed. At

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the conclusion of the course the student should have some familiarity with the basic code provisions in Subchapters C, K, and S of the income tax provision and the estate and gift tax provisions of the code. Where appropriate, planning ideas will be incorporated into the discussion.

**Class time:** 50% lecture, 20% discussion, 30% problems

**Workload:** 15 pages of reading per week, 3 exams

**Grade:** 45% mid-quarter exam(s), 40% final exam, 10% special projects, 5% class participation, there will be 2 midquarter exams

**Exam format:** multiple choice, short answer

## AEROSPACE ENG & MECHANICS

### AEM 1001 AEROSPACE ENGINEERING ORIENTATION

(Sec 1) prereq IT fr or soph, 1 cr

Instructor: GARRARD W

Dist Req: none

The objective of the course is to give you some idea of what engineers in the aerospace field do. This is accomplished by having engineers from industry talk about what they do and what products their companies manufacture.

**Class time:** 100% lecture

**Workload:** nothing required other than class attendance

**Grade:** 100% students must turn in a short description of each presentation - paragraph or two at most

**Exam format:**

### AEM 3401 INTRODUCTION TO DYNAMICAL SYSTEMS

(Sec 1) §ME 3201; prereq 3036, IT stu, 4 cr

Instructor: BALAS G

Dist Req: none

This course is concerned with the description of physical systems and phenomena by simple mathematical models. These models are used to predict the response of the physical systems to prescribed inputs and disturbances. The emphasis of the course is on the modeling and analysis of dynamic systems. All recitations, homeworks, quizzes and exams will be concerned with the development, analysis and design of mathematical models for physical systems. The course will essentially follow the text, except for the omission of some topics (e.g. hydraulic and pneumatic systems).  
Text: Ogata, "System Dynamics," Prentice-Hall, 2nd edition.

**Class time:** 80% lecture, 20% discussion

**Workload:** 30 pages of reading per week, 3 exams, 10 homework problem sets

**Grade:** 40% mid-quarter exam(s), 40% final exam, 20% problem solving

**Exam format:** word problems

### AEM 5200 KINEMATICS AND DYNAMICS OF FLUID FLOW

(Sec 1) prereq upper div IT or grad stu, 3036, Math 3252, 4 cr

Instructor: LONGMIRE E

Dist Req: none

Text: Fox and McDonald "Introduction to Fluid Mechanics".  
Topics: definitions, fluid statics, conservation of mass and mo-

mentum, Bernoulli equation, Euler's equations, irrotational flow. This is the first course of a sequence for AEM undergraduates and covers inviscid flow.

**Class time:** 90% lecture, 10% fluid mechanics films and demonstrations

**Workload:** 3 exams, 6 homework assignments

**Grade:** 35% mid-quarter exam(s), 35% final exam, 30% problem solving

**Exam format:** open book, open notes: solution of problems and sometimes written explanations of the physical situation.

### AEM 5329 FUNDAMENTALS OF AEROSPACE VEHICLE DESIGN

(Sec 1) prereq AEM sr, 5300 or #, 4 cr

Instructor: VANO A

Dist Req: none

First course in sequence which provide students the opportunity to accomplish the conceptual design of a spacecraft or aircraft. This course starts with a series of lectures which discuss the design process, selecting design requirements, identifying major trade issues, and developing a baseline vehicle configuration. Students select the spacecraft or aircraft design project, then submit a job application letter and resume requesting the discipline in which they wish to work. The students then work in their design teams which are structured to simulate a matrix organization typical for NASA and the aerospace industry. The students interface with each other at regularly scheduled discipline group and design team meetings where they identify and resolve outstanding design issues. A formal Configuration Control Board is convened to integrate the design and define the mission and vehicle(s). Communication skills are considered important and are stressed. Each student documents his/her design work in weekly status reports. Each design team completes a formal team written report and oral presentation documenting their conceptual design at the end of the quarter.

**Class time:** 40% lecture, 60% discussion

**Workload:** research into design trade issues, status reports, final written report/oral presentation

**Grade:** 40% written reports/papers, 10% quizzes, 30% in-class presentations, 20% class participation

**Exam format:** written final report and oral presentation

## AFRO-AMERICAN STUDIES

### AFRO 3601 INTRODUCTION TO AFRICAN LITERATURE

(Sec 1) 4 cr

Instructor: PIKE C

Dist Req: (CLA: D) (IT: D) (CSOM: D)

African Oral and Written Literature of 19th and 20th centuries. Most of course concentrates on post WWII literature written in English, French and African languages. Emphasis is on social, historical and cultural context of assigned texts.

**Class time:** 40% lecture, 60% discussion

**Workload:** 150 pages of reading per week, 2 exams, 5 papers, (papers are 2 pages each)

**Grade:** 40% mid-quarter exam(s), 60% final exam

**Exam format:** short answer and essay

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**AFRO 3910 TOPICS IN AFRO-AMERICAN/AFRICAN STUDIES**

(Sec 1) 4 cr

Instructor: PIKE C

Dist Req: none

A one-term, intensive study of Swahili as it is spoken in Kenya. Class meets 5 days per week, 1-2 hours with a Kenyan speaker of Swahili. Emphasis on oral communication. Course is focused on students planning to do internships in Kenya with MSID. Text: Hinnebusch 'Kiswahili'. Tapes in Walter Library Language Lab.

Class time: 50% lecture, 50% discussion

Workload: 2 exams, weekly quizzes

Grade: 10% mid-quarter exam(s), 25% final exam, 55% quizzes, 10% class participation

Exam format: short answer

**AGRI AND APPLIED ECON****AGEC 1000 ORIENTATION TO AGRICULTURAL AND APPLIED ECONOMICS**

(Sec.1) 1 cr

Instructor: BULTMANN M

Dist Req: none

The course is an introduction to the curricula, areas of specialization, coursework, employment opportunities, faculty and functions of the Department of Agricultural and Applied Economics. It is a required course for students in Applied Economics and Ag Business Management. It is a one credit course that meets 2 times a week during the first half of Fall Quarter. Class is offered only in Fall Quarter. Emphasis is placed on career and employment information as well as introducing students to areas of specialization in the fields of Agricultural and Applied Economics.

Class time: 90% lecture, 10% discussion

Workload: 3 papers, personal interview at the end of the quarter (20-30 minutes)

Grade: 50% written reports/papers, 50% attendance, more than 2 unexcused absences could result in a failing grade.

Exam format:

**AGEC 1101 PRINCIPLES OF MICROECONOMICS**

(Sec 1-2) §Econ 1101, 4 cr

Instructor: PETERSON W !!Morse Alumni Teaching Award Winner; also College of Ag Distinguished Teacher!!

Dist Req: (IT: C)

The course contains three main topics: how consumers maximize utility, how business firms maximize profits, and how prices and wages are determined in the output and input markets. Additional topics include the costs and returns of a college education, and how students can better manage their time. The instructor uses his own text. Class time is devoted to answering questions based on the assigned reading in the text. The exams focus on these questions.

Class time: 90% lecture, 10% discussion

Workload: 40 pages of reading per week, 4 exams

Grade: 100% quizzes

Exam format: multiple choice

**AGEC 3001 APPLIED MICROECONOMICS: CONSUMERS AND MARKETS**

(Sec 1-5) §Econ 3101; prereq 1101 or Econ 1101, Math 1142 or Math 1211, Stat 1001 or IDSc 1010, OMS 1020 or #, 4 cr

Instructor: SENAUER B

Dist Req: (IT: C)

This is a course in intermediate price theory, consumer demand and marketing. Through lectures, readings, problem sets, and lab sessions, we will work on the theory and application of demand analysis. You will also gain a practical understanding of the economics of consumer behavior and markets, particularly American food consumers and the U.S. food market. The course complements and is part of a sequence with AgEcon 3002 (Managerial Economics) and AgEcon 3003 (Markets and Prices).

Class time: 66% lecture, 33% laboratory

Workload: 30 pages of reading per week, 3 exams, 6 homework assignments

Grade: 40% mid-quarter exam(s), 35% final exam, 25% problem solving

Exam format: combination of true/false, problems and short essay

**AGEC 3040 ECONOMIC DEVELOPMENT OF AMERICAN AGRICULTURE**

(Sec 1) prereq 1101 or Econ 1101, 4 cr

Instructor: WELSCH D

Dist Req: (IT: C)

A review of the economic, political, social and technical forces that have shaped the development of American agriculture; the interaction of foregoing forces and their influence on agricultural development; the role of agricultural development in national economic development in the U.S., implications for presently developing countries; current issues in agricultural development. Obj: To help student understand how American agriculture developed as it did, and why. With this background, the student can better understand present and future developments of American agriculture, the place of agriculture in developing national and world economies, and implications of the U.S. experience for the less-developed world. Text: "The Development of Am. Agriculture: A Historical Analysis" Willard W. Cochrane, second edition, 1993; other readings: "New Directions for Agriculture and Agricultural Research" K. A. Dahlberg, 1986 chapters 1 and 5; "Alternative Agriculture" NRC, 1989, Executive Summary.

Class time: 40% lecture, 40% discussion, 20% cooperative learning in small groups

Workload: 50 pages of reading per week, 4 exams, 2 papers

Grade: 60% mid-quarter exam(s), 10% final exam, 20% written reports/papers, 10% in-class presentations

Exam format: essay

**AGEC 3420 GRAIN MARKETING ECONOMICS**

(Sec 1) prereq 1101 or Econ 1101, 4 cr

Instructor: DAHL R

Dist Req: none

Economic relationships in the marketing of grains and grain products; analysis of supply and demand; grain grades, storage and transportation; market structure, channels, pricing, and com-

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petition; government programs and policies.

**Class time:** 90% lecture, 10% discussion, lectures outlined on overhead transparencies with analysis using problems and graphs

**Workload:** 25 pages of reading per week, 3 exams, homework exercises involving marketing problems are assigned, completed and graded

**Grade:** 50% mid-quarter exam(s), 50% final exam, grades on homework exercises are used in marginal grade decisions

**Exam format:** problems, multiple choice, short written answers

### AGEC 3450 AGRICULTURAL INPUT MARKETING ECONOMICS

(Sec 1) prereq 1101 or Econ 1101, 4 cr

Instructor: DAHL D

Dist Req: none

**Purpose:** Application of economic principles and simple quantitative methods to business problems dealing with manufacture and distribution of inputs used in farm production. Includes economic descriptions of farm supply industries and related institutional arrangements over time, understanding how prices are determined and interrelated in system of markets involved, and what public policies do to guide this complex pattern of business activity. **Method:** 30 classes are scheduled MTW of first 10 wks as standard lecture-discussion meetings. Remaining classes (usually Fri) will be used for presentations by invited speakers, tests, or as review sessions. There are 5 unit tests, one comprehensive final. Each unit test covers only material (readings, lecture) for prior topic unit. Final test addresses the entire subject matter of the course, and is MC or matching. Total points earned will be sole basis for her/his course grade. Reading materials packet from KINKO's.

**Class time:** 70% lecture, 20% discussion, 10% outside speakers

**Workload:** 40 pages of reading per week, 5 exams

**Grade:** 75% mid-quarter exam(s), 25% final exam

**Exam format:** problem essay questions (graded by professor)

### AGEC 3500 AGRIBUSINESS FINANCE

(Sec 1) prereq 1250 or Acct 1050 and AgEc 3002 or #, 4 cr

Instructor: PEDERSON G

Dist Req: none

**Topics include:** analysis of financial statements and performance of agribusiness firms; evaluation of capital investment projects, selection of financial structure, risk management, and introduction to financial markets and credit institutions. Teaching is primarily accomplished through lecture and problem-solving exercises, and students analyze business case problems. Text and course supplementary notes are the primary reference materials. The text is authored by Cooley, P.L. and P.R. Roden. Business Financial Management (Dryden Press, 1991). Supplementary notes were developed by the instructor to assist students in note-taking and working problems.

**Class time:** 70% lecture, 30% discussion

**Workload:** 3 exams

**Grade:** 40% mid-quarter exam(s), 20% final exam, 40% problem solving

**Exam format:** problems and essay

### AGEC 3610 RESOURCE DEVELOPMENT AND ENVIRONMENTAL ECONOMICS

(Sec 1-2) prereq 1101, 1102 or Econ 1101, Econ 1102 or #, 4 cr

Instructor: WELSCH D

Dist Req: (IT: C)

The course provides a one quarter introduction to natural resource and environmental economics. The course intends to demonstrate how economic reasoning can be used to develop insights into the causes of, consequences of, and appropriate policies for a variety of environmental and natural resource-related problems. The first part of the course covers general topics in the field of environmental economics including externalities such as pollution, public decision criteria such as benefit-cost analysis, and the valuation of non-market goods. The second part of the course will broadly cover the theory of renewable and nonrenewable resource allocation. While several specific examples and applications will be presented in the lectures, group projects will be the principal vehicle for in-depth analysis on current topics. Strong international orientation, international students and students in majors other than AG ECON strongly encouraged to enroll and welcomed. Text: "Environmental and Natural Resource Economics," Tom Tietenberg, Third Edition 1992. Also a few readings from current journals.

**Class time:** 20% lecture, 40% discussion, 40% small group work/cooperative learning

**Workload:** 70 pages of reading per week, 3 exams, 1 paper

**Grade:** 75% mid-quarter exam(s), 15% written reports/papers, 10% in-class presentations

**Exam format:** part essay, part multiple choice

### AGEC 5400 INTERMEDIATE MARKET AND PRICE ANALYSIS

(Sec 1) prereq 3003 or Econ 3101 or #, 4 cr

Instructor: HAMMOND J

Dist Req: none

The course is an application of economic principles, models, and tools to the study of agricultural markets and prices. It is intended to demonstrate how unique characteristics of supply and demand for agricultural products impact on the price and output performance in the sector. This includes imperfect markets in agriculture and their potential to affect prices to both producers and consumers. Analytical tools and techniques for measuring and elasticities and elasticity interrelationships for food products, lag, and for measuring supply response in agriculture are presented. Time, form, and spatial aspects of markets are examined with respect to price and elasticity interrelationships. The economic impacts of government intervention in agricultural markets through various mechanisms such as, price discrimination programs, price supports, subsidies, and stabilization schemes, are examined.

**Class time:** 90% lecture, 10% discussion

**Workload:** 60 pages of reading per week, 2 exams, 3-4 problem sets

**Grade:** 33% mid-quarter exam(s), 50% final exam, 17% homework

**Exam format:** word problems and essay

### AGEC 5580 HUMAN CAPITAL AND HOUSEHOLD ECONOMICS

(Sec 1) prereq 3001 or Econ 3101 or #, 3 cr

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Instructor: KINSEY J

Dist Req: none

The theories of household economics and investment in human capital will be learned. Its usefulness to explain and analyze investment in children, education, health will be examined. Returns from such investment in terms of labor force participation and wages, the value of non-market work and lifetime earnings will be analyzed. The influence of expected returns, discrimination, and the implicit value of time will be examined for their effects on investment decisions and substitutions between capital and labor in production. The impact of investment in human capital on national economic development and growth and differences between third world and western countries will be explored.

**Class time:** 80% lecture, 20% discussion

**Workload:** 60 pages of reading per week, 2 exams, 2 homework assignments - estimate value of investments

**Grade:** 30% mid-quarter exam(s), 40% final exam, 20% special projects, 10% class participation

**Exam format:** short answer essay

### AGEC 5620 REGIONAL ECONOMIC ANALYSIS

(Sec 1) prereq 1101 or Econ 1101, 3 cr

Instructor: LOVERIDGE S

Dist Req: none

Analysis of regional industry and community structure; the role of resource, transportation, and institutional constraints. Trade, migration, and investment in regional growth and change. Use of regional economic information in business investment and location planning.

**Class time:** 90% lecture, 10% discussion

**Workload:** 50 pages of reading per week, 2 exams, 1 paper

**Grade:** 20% mid-quarter exam(s), 60% final exam, 20% written reports/papers

**Exam format:** short answer

### AGEC 5750 AGRICULTURAL TRADE AND COMMERCIAL POLICIES

(Sec 1) prereq 3001, 3006 or Econ 3101, Econ 3102 or #, 3 cr

Instructor: HOUCK J

Dist Req: (CSOM: C)

This course will focus on the nature of trade in agricultural products, trade policies and practices of import and export nations, agricultural policies of common market areas and other major trading blocks, market instability and other primary commodity problems, trade negotiations, and current developments in agricultural trade and trade policy. Text: James P. Houck, 'Elements of Agricultural Trade Policies', Waveland Press, Inc., Illinois (1992). Other readings will be assigned from various journals, books and research bulletins that will be on reserve in the St. Paul Campus Library.

**Class time:** 80% lecture, 20% discussion

**Workload:** 50 pages of reading per week, 3 exams, 1 paper

**Grade:** 30% mid-quarter exam(s), 60% final exam, 10% written reports/papers

**Exam format:** word problems and short essay

### AGEC 5790 WORLD FOOD PROBLEMS

(Sec 1) §Agro 5200, FScN 5643, LACS 5280, Soc 5675, 3 cr

Instructor(s): PETERSON W !!Morse Alumni Teaching Award

**Winner; also College of Ag Distinguished Teacher!!**, 3 OTHERS

Dist Req: (IT: C) (CSOM: C)

This is a multi-disciplinary course which meets concurrently with AGRO 5206 (Agronomy), CAPS 5280 (Veterinary medicine) and FSCN (food science). The course focuses on causes and possible solutions of the world food problems as seen from the perspectives of the four disciplines. Main emphasis is on the less developed countries. Previous training in the four disciplines is not required.

**Class time:** 60% lecture, 40% discussion

**Workload:** 40 pages of reading per week, 1 exam, 4 written homework assignments

**Grade:** 50% final exam, 10% class participation, 40% problem solving

**Exam format:** essay

### AGEC 5860 ECONOMICS OF AGRICULTURAL PRODUCTION

(Sec 1) prereq 3003 or #, 3 cr

Instructor: APLAND J

Dist Req: none

Production economics theory and its application to agricultural problems. Optimal resource allocation under profit maximization. Introduction to decision theory and capital budgeting.

**Class time:** 90% lecture, 10% discussion

**Workload:** 30 pages of reading per week, 2 exams, 4 problem sets

**Grade:** 45% mid-quarter exam(s), 45% final exam, 10% class participation

**Exam format:** problems, essay

## AGRICULTURAL ENGINEERING

### AGEN 1060 AGRICULTURAL ENGINEERING ORIENTATION

(Sec 1) 1 cr

Instructor: WILCKE W

Dist Req: none

Introduction to the agricultural engineering profession through lectures, readings, discussion, and presentations by faculty, practicing engineers, and fellow students. For students interested in majoring in agricultural engineering or exploring the profession. Discussion of various areas of specialization along with the environment, safety, ethics, and professionalism. Identification of internships, employment opportunities and advanced studies.

**Class time:** 75% lecture, 25% discussion

**Workload:** several small writing assignments

**Grade:** 25% written reports/papers, 75% class participation

**Exam format:**

### AGEN 3052 ENGINEERING PRINCIPLES OF SOIL-WATER-PLANT SYSTEMS

(Sec 1-2) prereq AEM 3016 or ¶3016, IT stu, 4 cr

Instructor: CLANTON C

Dist Req: none

Soil properties of physical, texture, moisture, saturated and unsaturated moisture movement, strength, temperature and heat flow. Plant properties of structure, growth, evapotranspiration, photosynthesis, respiration and microclimate. Energy and water bal-

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ance in soil-plant system. Plant stresses from drought, flooding, temperature, radiation, compaction and pollution. Engineering and management impacts on the soil-water-plant systems. This course is designed for junior students in agricultural engineering to provide fundamentals and basics of soil-water-plant relationships for upper senior level courses. Text: Hillel, D. 1980 "Fundamentals of Soil Physics".

**Class time:** 66% lecture, 33% laboratory

**Workload:** 4 exams, 1 paper

**Grade:** 40% final exam, 30% quizzes, 30% lab work

**Exam format:** quizzes - short answer; final - problems

### AGEN 5050 INTERN REPORTS

(Sec 1) prereq IT stu, #, 2 cr

Instructor: CHAPLIN J

Dist Req: none

Report writing for agricultural engineering majors participating in internships with a company. The reports reflect the work that they accomplish during an intern period. Interns are expected to integrate into a design team to build leadership skills, problem definition, problem solving, and documentation of work activities in a timely manner. Site visits are arranged periodically throughout the internship.

**Class time:** 100% work related activities

**Workload:** 1 report

**Grade:** 100% written reports/papers

**Exam format:** no exams

### AGEN 5074 MICROCOMPUTER INTERFACING

(Sec 1) prereq IT upper div or grad IT, AgET 3030 or CSci 3101 or 3102, 4 cr

Instructor: GOODRICH P

Dist Req: none

Introduction to digital components, integrated circuits, and microcomputers. Interfacing of microcomputers for data acquisition and control. This is a hands-on course and students get to use the computers and wire up all of the circuits and chips. Learning-by-doing as well as understanding the specifications of complex as well as simple chips and circuits. A working project that senses and controls a system is the final project.

**Class time:** 50% lecture, 50% laboratory

**Workload:** 30 pages of reading per week, 3 exams, 1 paper

**Grade:** 50% mid-quarter exam(s), 25% final exam, 10% special projects, 15% quizzes

**Exam format:** problems

### AGEN 5350 AGRICULTURAL MACHINERY AND TERRAMECHANICS

(Sec 1) prereq IT upper div or grad IT maj, AEM 3016, AEM 3036, 4 cr

Instructor: CHAPLIN J

Dist Req: none

An advanced course covering the engineering principles of machine-soil interaction. Topics include traction, tillage and off-road vehicle dynamics. Special emphasis is placed on the design of safe machinery for an international marketplace. The laboratory is equipped with a computer controlled Machine Soil Simulator that allows model simulations to take place in the laboratory. Although the course emphasis is placed on terramechanics, basic

design of drive-lines, power unit selection and duty cycle analysis are covered to provide a powerline set of tools for students seeking employment in vehicle design.

**Class time:** 60% lecture, 40% laboratory

**Workload:** 40 pages of reading per week, 3 exams

**Grade:** 40% final exam, 30% lab work, 40% exams

**Exam format:** 1/3 short answer-multiple choice; 2/3 problems

### AGEN 5540 WATERSHED ENGINEERING

(Sec 1) prereq 3052 or CE 3300, CE 3400, IT upper div or grad IT, 4 cr

Instructor: WILSON B

Dist Req: none

The objective of this course is to apply engineering principles in the management and design of hydrologic and surface water quality systems. Topics include techniques for hydrologic analyses of small watersheds, the design of water conveyance systems such as vegetative waterways and terraces, the hydraulic and sedimentologic impact of reservoirs and detention ponds, and the control and prediction of soil erosion and transport. The laboratory exercises are used to analyze a natural resource issue for a particular watershed in Minnesota.

**Class time:** 65% lecture, 10% discussion, 25% laboratory

**Workload:** 30 pages of reading per week, 2 exams, 1 paper, weekly problem solving assignments

**Grade:** 20% mid-quarter exam(s), 30% final exam, 25% lab work, 25% problem solving

**Exam format:** open book, open notes, problem solving questions

### AGEN 5745 VENTILATING SYSTEMS FOR IN-DOOR AIR QUALITY

(Sec 1) prereq IT upper div or grad IT maj, ME 3301, CE 3400 or AEM 3200, 4 cr

Instructor: JANNI K

Dist Req: none

Impact of indoor air quality on humans, animals and plants. Contaminant sources. Ventilating processes, systems, control strategies, and equipment for indoor air quality control. Case studies from residential, commercial and agricultural systems. This course will introduce students to biologically based considerations and design requirements of environmental control systems (HVAC) for biological subjects. In addition to thermal environmental and energy concerns, indoor air quality and the health and safety of humans, animals, plants and food products must be considered by engineers, designers and managers of HVAC systems, and environmental health professionals. This course will introduce students to indoor air quality problems (ex. sick building syndrome), additional design criteria for biological subjects, sources (off-gassing from new products), basic ventilating processes, methods of control (ex. source control, removal, dilution), equipment (ex. filtration, cyclones, electrostatic precipitators, chemisorbers), and applications (ex. residences, offices, auditoriums, and animal systems).

**Class time:** 65% lecture, 15% discussion, 20% class activities

**Workload:** 50 pages of reading per week, 4 exams, 1 paper, 1 design project

**Grade:** 30% mid-quarter exam(s), 15% final exam, 15% written reports/papers, 15% special projects, 5% class participation, 20% problem solving

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**Exam format:** open book-open note, matching, short answer, problems

## AGRI ENG TECHNOLOGY

### AGET 5027 APPROPRIATE TECHNOLOGY FOR INTERNATIONAL DEVELOPMENT

(Sec 1) prereq Math 1111, Chem 1001 or 1004, Phys 1041, 4 cr  
Instructor: GOODRICH P  
Dist Req: none

This course will serve as a medium for introducing interested students to appropriate technologies for developing countries and will emphasize evaluation of such technologies from the technical viewpoint. As used in this course "appropriate technology" refers to technologies which are largely capital saving being suitable to small farms, small businesses and small incomes. Thus, appropriate technology is generally small scale and decentralized utilizing local materials, labor and ingenuity. It makes maximum use of renewable resources and does not require large financial investment. Such technologies must be compatible with local cultural, economic and social conditions.

**Class time:** 50% lecture, 20% discussion, 30% laboratory

**Workload:** 25 pages of reading per week, 2 exams, 2 papers, 1 building (group of 3) an appropriate device

**Grade:** 25% mid-quarter exam(s), 25% final exam, 20% special projects, 15% lab work, 15% problem solving

**Exam format:** essay, problems

## AGRICULTURE

### AGRI 1000H HONORS COLLOQUIUM

(Sec 80) prereq honors program registration, □, 2 cr  
Instructor: BUHR B

Dist Req: none

Biotechnology in agriculture includes numerous innovations in plants and animals with the common factor that all are associated with the alteration of genetic material by man. As a result of the potential changes in biological processes and products, there will also be social and economic consequences. Students in this course will learn how potential changes from biotechnology impact the agricultural and food economy. This will include issues of the economic impacts on the structure of production (e.g., farm size, or input industry structure), prices, consumers, rural communities, natural resources and other aspects of the food economy. This discussion will be broadened to consider the social and ethical issues also associated with biotechnology including, man's alteration genetic structure, food safety and security, regulation and patenting of biotechnology, and economic equity (i.e., who gains and who loses?). Students will participate in group discussions which will focus on determining policy for biotechnologies and will present their group's position to the rest of the class for consideration (40%). Students will also write a 10-15 page term paper on a topic encountered in class, and in consultation with instructor (60%).

**Class time:** 50% lecture, 50% discussion

**Workload:** 40 pages of reading per week, 1 paper

**Grade:** 60% written reports/papers, 20% special projects, 10% in-class presentations, 10% class participation

**Exam format:**

## AGRONOMY & PLANT GENETICS

### AGRO 1010 PRINCIPLES OF AGRONOMY

(Sec 1) §3010, 3020, 3030, 5 cr

Instructor: SIMMONS S !!Morse Alumni Teaching Award Winner; also College of Ag Distinguished Teacher!!

Dist Req: none

Principles and practices of plant and related sciences as they apply to increasing efficiency, productivity, and genetic improvement of field crops. Topics include crop selection, improvement of crops through plant breeding, seeds and seeding, growth and development, minimizing production hazards, harvesting and storage. Lecture and laboratory. This course is intended for students who desire a general background in the principles and technology of field crop production. The laboratory emphasizes crop identification and utilization. Class notes and a laboratory manual have been prepared for this class. Students are required to prepare a proposal for the production of a specific crop at a selection location in Minnesota utilizing crop production information from a variety of sources.

**Class time:** 65% lecture, 5% discussion, 25% laboratory, 5% problem solving

**Workload:** 25 pages of reading per week, 3 problem sets

**Grade:** 40% mid-quarter exam(s), 20% final exam, 20% lab work, 20% problem solving

**Exam format:** short answer essay with some multiple choice and problems

### AGRO 1020 SPECIAL PROBLEMS

(Sec 1-2) prereq 5 cr agronomy, #, 1-3 cr

Instructor: SMITH L !!Morse Alumni Teaching Award Winner; also College of Ag Distinguished Teacher!!

Dist Req: none

In depth research or studies in Agronomy. Intended for students who wish to pursue aspects of Agronomy in greater depth than that offered in formal courses, or who wish to investigate areas not presently offered in course. Tutorial instruction under staff guidance.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

### AGRO 3030 MATURATION, HARVEST, AND STORAGE OF FIELD CROPS

(Sec 1-3) prereq Biol 1009, Chem 1005, 4 cr

Instructor: SMITH L !!Morse Alumni Teaching Award Winner; also College of Ag Distinguished Teacher!!

Dist Req: none

Development and maturation of grains and forage crops, including the synthesis and accumulation of organic constituents and changes in these constituents as a result of the maturation process. Estimation of crop maturity and development of criteria for crop harvest, role of pre- and post-harvest treatments in preparation for

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storage, and losses associated with crop harvest. Principles of storage and preservation of crops in moist or dry state. Lecture and laboratory. Three problem solving situations and one case study relating to the course are required. Class notes and laboratory manual are utilized in the course. Required readings are given with each of the major topical areas. All readings are housed in the assigned reading section of the St. Paul Campus Library.

**Class time:** 65% lecture, 5% discussion, 25% laboratory, 5% problem solving and case studies

**Workload:** 20 pages of reading per week, 3 exams, 3 problem sets

**Grade:** 20% mid-quarter exam(s), 20% final exam, 25% lab work, 20% problem solving

**Exam format:** short essay and problems

### **AGRO 5040 CORN AND SOYBEAN MANAGEMENT**

(Sec 1) prereq 3010, 3020, 3030, Soil 1122 or #, 3 cr

Instructor: HARDMAN L

Dist Req: none

This course utilizes lectures, discussions and problem situations to apply the results of corn and soybean management research conducted in Minnesota. Required readings and handouts support each topic area. Topics are Agronomic aspects of the climate and soil types in Minnesota, crop and cultivar selection, crop residue management, cropping systems, nutrient management, pest management (weeds, insects, diseases), water management, trouble shooting, harvest and storage, and economic considerations. Students are expected to read the assigned scientific journal articles, extension publications and articles from general interest agricultural publications and use the information to suggest Best Management Practices for various situations suggested by the instructor. Written and oral presentations of these plans are required.

**Class time:**

**Workload:** 30 pages of reading per week, 1 exam, quizzes, written/oral solutions to problems

**Grade:** 40% final exam, 30% written reports/papers, 30% quizzes

**Exam format:** mixture or short answer essay and/or interpretation of graphs, charts or tables which are provided

### **AGRO 5130 MATURATION, HARVEST, AND STORAGE OF FIELD CROPS**

(Sec 1-3) §3030; prereq Biol 1009, Chem 1005, 4 cr

Instructor: SMITH L !!Morse Alumni Teaching Award Winner; also College of Ag Distinguished Teacher!!

Dist Req: none

Development and maturation of grains and forage crops, including the synthesis and accumulation of organic constituents and changes in these constituents as a result of the maturation process. Estimation of crop maturity and development of criteria for crop harvest, role of pre- and post-harvest treatments in preparation for storage, and losses associated with crop harvest. Principles of storage and preservation of crops in moist or dry state. Lecture and laboratory. Three problem solving situations and one case study relating to the course are required. Class notes and laboratory manual are utilized in the course. Required readings are given with each of the major topical areas. All readings are housed in the assigned reading section of the St. Paul Campus Library. Paper

required for AGRO 5130.

**Class time:** 65% lecture, 5% discussion, 25% laboratory, 5% problem solving and case studies

**Workload:** 20 pages of reading per week, 3 exams, 3 problem sets

**Grade:** 20% mid-quarter exam(s), 20% final exam, 15% written reports/papers, 25% lab work, 20% problem solving

**Exam format:**

### **AGRO 5310 ORIENTATION TO FIELD CROP BREEDING**

(Sec 1) prereq 5020 or #, 1 cr

Instructor: STUTHMAN D

Dist Req: none

Field study of plant breeding programs and techniques. The class consists of weekly two-to-three hour sessions and two half-day field trips, one to Rosemount and one to the Horticultural Research Center at Excelsior. Each session features the field activities of a plant breeding or plant genetics research project. A typical session includes a brief general orientation followed by a visit to the actual field area on the campus where the research is being conducted. Course requirements include class attendance and a special project with an accompanying interpretive paper of one-to-two typewritten pages. Grading is S/N only.

**Class time:** 10% lecture, 90% field trips

**Workload:** 2 pages of reading per week, 1 paper

**Grade:** 50% written reports/papers, 50% class participation

**Exam format:**

## **AMERICAN INDIAN STUDIES**

### **AMIN 3242 SURVEY OF AMERICAN INDIAN ARTS**

(Sec 1) 4 cr

Instructor: LIBERTUS R

Dist Req: (CLA: D) (IT: D) (CSOM: D)

This course is designed to acquaint students with American Indian arts from pre-contact to contemporary times. It focuses on materials, techniques and traditions that underlie the art form in various tribal regions of the United States. Historically, it discusses the influences from within tribes, the influences on art exerted by other tribes and eventually European influence. I use 'Native Arts of North America' by Christian Fiest and selected readings from books on library reserve on specific subjects. I also use educational videos such as 'Maria Martinez - Potter of the Pueblos' and others. We make one class field trip to the Anthropology Department to visit the Mimbres pottery collection (a pre-contact pottery culture).

**Class time:** 60% lecture, 10% closed-circuit TV, 25% discussion, 5% laboratory

**Workload:** 50 pages of reading per week, 2 exams, 1 paper, 1 special project - an art project

**Grade:** 25% mid-quarter exam(s), 30% final exam, 20% written reports/papers, 20% special projects, 5% class participation

**Exam format:** multiple choice, short essay, one larger essay question

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## ANIMAL & PLANT SYSTEMS

### ANPL 1001 ORIENTATION TO ANIMAL AND PLANT SYSTEMS

(Sec 1) 1 cr

Instructor: SMITH L !!Morse Alumni Teaching Award Winner; also College of Ag Distinguished Teacher!!

Dist Req: none

Orientation seminar specifically for new students majoring in Animal and Plant Systems in the College of Agriculture. Specific topics discussed include: History of Land Grant Universities and COA, maximizing your college education (using the COA portfolio), preparing for a career in agriculture, Areas of societal concern in agriculture (students will select one or more), Global concerns in agriculture, Research (the experimental method), Extension information service to the public. Seminar is open to all interested persons.

**Class time:** 35% lecture, 65% discussion

**Workload:** interviews, newspaper articles (locate/read), portfolio and course preparation

**Grade:** 50% written reports/papers, 25% special projects, 25% class participation

**Exam format:**

## ANIMAL SCIENCE

### ANSC 1100 INTRODUCTORY ANIMAL SCIENCE

(Sec 1) 5 cr

Instructor(s): SEYKORA A, OTHERS

Dist Req: none

This course is an introduction to animal science with emphasis on genetics, physiology and nutrition. Production systems relative to the horse, dairy, sheep, poultry, swine and beef industries are introduced. Additional topics include man's relationship to animals, current issues and future perspectives of animal agriculture. The course is team taught with five different instructors.

**Class time:** 80% lecture, 20% discussion

**Workload:** 5 exams, 7 problem sets

**Grade:** 50% mid-quarter exam(s), 25% final exam, 25% problem solving

**Exam format:** true-false, multiple choice, short answer, essay

### ANSC 1301 MANAGEMENT TECHNIQUES: SWINE

(Sec 1) prereq #, 1 cr

Instructor: HAWTON J

Dist Req: none

This course is recommended for students interested in swine and having little or no past experience with this species. Students should expect to gain some competency in the use of several skills and management techniques for raising pigs. Students must learn 7-8 of the following management practices: proper handling, cleaning/housekeeping, care of sow at farrowing, assisting sows during birth process, processing baby pigs, castration, feeding, estrus detection, pregnancy determination, management of the boar, semen collection, artificial insemination, care of equipment, detecting abnormalities and illness, administering medication, herd records and feed preparation. Student performance will be

evaluated by barn manager. One credit is given in exchange for 4 hrs/wk and gaining a proficiency level of "satisfactory" for all management practices chosen to learn. Grades will be given as S/N only.

**Class time:** 10% discussion, 90% hands-on experience - management practices

**Workload:** 4 hrs/wk engaged in hands-on management practices

**Grade:** 100% must gain competency in 7-8 skills/techniques used in swine management

**Exam format:**

### ANSC 1302 MANAGEMENT TECHNIQUES: SHEEP

(Sec 1-2) prereq #, 1 cr

Instructor: CHRISTIANS C

Dist Req: none

Practical, hands-on practices relating to all phases of sheep production. Topics conducted are lamb management, docking, castration, tagging, feeding; Ewe management- pre and post lambing, including feeding ration formulation, shearing lambing record evaluation; wool evaluation and marketing. Students will be involved in applied research conducted at sheep research center.

**Class time:** 100% laboratory

**Workload:** all hand-on, hand outs provided

**Grade:** 100% lab work

**Exam format:** oral evaluation

### ANSC 3111 INTRODUCTION TO ANIMAL BEHAVIOR

(Sec 1) §EEB 3111; prereq Biol 1008 or Biol 1009 or #, 4 cr

Instructor: PHILLIPS R

Dist Req: none

This course is a survey of the biological study of behavior, including questions of causation, development, function and evolution; it emphasizes the evolution of behavior, especially that of social behavior, of animals in their natural environments. Topics include the genetic basis for behavioral evolution; mechanisms of development; mechanisms for detecting and reacting to events in the environment; ways of studying evolutionary history of behavior; behavior as an adaptive mechanism; and detailed analysis of the effects of environment on reproduction, sexual and parental behavior, and on social behavior. Finally human behavior is examined in light of results of studies of other species. Texts: Alcock, John "Animal Behavior. An Evolutionary Approach" 5th edition; Dawkins, R. "The Selfish Gene" 2nd edition.

**Class time:** 60% lecture, 25% discussion, 15% videos and films

**Workload:** 55 pages of reading per week, 2 exams, 2 papers

**Grade:** 25% mid-quarter exam(s), 35% final exam, 40% written reports/papers

**Exam format:** essay

### ANSC 3142 ADVANCED LIVESTOCK JUDGING

(Sec 1) prereq 3130, 2 cr

Instructor: HAWTON J

Dist Req: none

This course is designed for students who have previously taken ANSC 3130 and have competed in beginning level collegiate judging events. Objectives of the course are: 1) to further improve students' knowledge of livestock breeds including type and pro-

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duction differences; 2) to improve students' knowledge of the desired animal conformation (structural) and composition (percent lean); 3) to incorporate growth and reproduction performance data into the selection criteria; 4) to improve students' skills in decision making, thought organization and oral expression. Students in this class will represent the U of M in national collegiate livestock judging contests.

**Class time:** 10% lecture, 30% discussion, 30% laboratory, 30% students groups exchanging information

**Workload:** from 10-12 hours/week - all work done in class

**Grade:** based on a percentage of total possible points

**Exam format:** Students are graded on the basis of total points obtained throughout the quarter. They must acquire 80% or better, of the total possible points to achieve an A, 70% to get a B, etc

### ANSC 3143 MEATS JUDGING AND GRADING

(Sec 1) prereq 1120 or ¶, 2 cr

Instructor: EPLEY R

Dist Req: none

This course provides in-depth training in evaluation of beef, pork and lamb carcasses as well as wholesale cuts. Evaluation decisions are supported by written reasons. Students also become proficient in quality and yield grading of beef carcasses. Training is also provided in determining if wholesale cuts meet USDA specification requirements. Field trips include participation in intercollegiate meat judging contests.

**Class time:** 20% lecture, 60% laboratory, 20% field trips

**Workload:** 10 pages of reading per week, 2-4 field trips

**Grade:** 70% lab work, 10% class participation, 20% field trips

**Exam format:** essay, problem solving

### ANSC 3220 PRINCIPLES OF ANIMAL BREEDING

(Sec 1) prereq GCB 3022 rec, 5 cr

Instructor: SEYKORA A

Dist Req: none

This course is the application of qualitative genetic principles to animal breeding. Topics included: 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. Text: "Breeding and Improvement of Farm Animals" by J.E. Legates and Everett J. Warrick is utilized with weekly reading and problem solving assignments.

**Class time:** 80% lecture, 20% discussion

**Workload:** 30 pages of reading per week, 3 exams

**Grade:** 30% mid-quarter exam(s), 15% final exam, 15% special projects, 15% quizzes, 25% problem solving

**Exam format:** true-false, multiple choice, problem solving

### ANSC 3301 SYSTEMIC PHYSIOLOGY

(Sec 1-2) prereq Biol 1011, BioC 1301, 6 cr

Instructor(s): HUNTER A !! College of Agriculture Distinguished Teacher !!, EL HALAWANI M

Dist Req: none

An introduction to physiology of the body. Lectures cover the following systems: nervous, circulatory, urinary, respiratory, digestive, endocrine and reproductive. Text: Schauf et al. 'Human

Physiology'. Course is team-taught and has 4 instructors.

**Class time:** 83% lecture, 17% laboratory

**Workload:** 40 pages of reading per week, 4 exams

**Grade:** 48% mid-quarter exam(s), 36% final exam, 16% lab work

**Exam format:** multiple choice or short answer

### ANSC 3401 PRINCIPLES OF ANIMAL NUTRITION

(Sec 1) §1401; prereq Chem 1002 or BioC 1301 or Chem 3301, 3 cr

Instructor: PETTIGREW J

Dist Req: none

Classification and function of nutrients, use of nutrients for body maintenance growth, egg production, gestation and lactation, comparative study of the digestive systems of farm animal species. Objectives: 1) to acquaint the student with the nutrients, including their classification, chemical nature and functions; 2) to acquaint the student with the digestive processes of farm animal species; 3) to explain the use of nutrients for body maintenance and for the productive functions of growth, egg production, gestation and lactation. Required text: "Basic Animal Nutrition and Feeding" 3rd edition (1988) Church and Pond.

**Class time:** 90% lecture, 10% discussion

**Workload:** 25 pages of reading per week

**Grade:** 57% mid-quarter exam(s), 43% final exam

**Exam format:** short answer

### ANSC 5322 PHYSIOLOGY OF REPRODUCTION

(Sec 1) prereq 6 cr systemic physiology, 5 cr

Instructor: CRABO B

Dist Req: none

The course will give an overview of reproductive endocrinology, male and female reproduction, reproductive patterns and management of individual domestic species. Less emphasis will be given areas where special courses are offered (Endocrinology, Fertilization and Gestation, Immunoreproduction, Preservation of Spermatozoa and Embryos). The classroom sessions will attempt to tie together morphology, chemistry with physiology of reproduction to the extent the instructor is capable. It is obvious that some basics of histology, ultrastructure, chemistry and immunology have to be included if all students have not previously been exposed to these areas. Some techniques for evaluation of endocrine balance and reproductive capacity will be discussed.

**Class time:** 65% lecture, 20% discussion, 15% laboratory

**Workload:** 100 pages of reading per week, 3 exams, 1 paper, handouts provided

**Grade:** 30% final exam, 20% written reports/papers, 50% two exams (1 after each 1/3 quarter)

**Exam format:**

### ANSC 5605 POULTRY PRODUCTION

(Sec 1) prereq 1401 or 3401...5405 rec, 4 cr

Instructor: HAMRE M

Dist Req: none

The physiology, genetics, diseases, and nutrition of poultry and their relation to current management practices for production of eggs, broilers, and turkeys. Technical and practical aspects of production and marketing in relation to their underlying principles. A schedule of topics will be presented each quarter. Class discussion and lectures will primarily deal with the scheduled

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topics. Students will be expected to actively participate in class discussion. Short written and oral exercises will be a frequent class activity. Course content will be modified to meet interests of students as much as practicable. More in-depth student interests may be explored and presented as class reports. Text: 'Poultry Production', Austic and Nesheim, 13th ed.

**Class time:** 50% lecture, 35% discussion, 15% laboratory

**Workload:** 30 pages of reading per week, 3 exams, 1 paper

**Grade:** 75% 3 exams (25% each); 25% quizzes; paper; class participation

**Exam format:** mostly short answer

## ANTHROPOLOGY

### ANTH 5115 ECONOMIC ANTHROPOLOGY

(Sec 1) prereq 1102 or 5102, 3201 or #, 4 cr

Instructor: GUDEMAN S

Dist Req: none

The course will develop a cross-cultural or comparative perspective on economic life, focusing on the interplay between exotic data and the theories that are used to explain the data. During the term we will consider four different approaches: formalism or neoclassical theory, substantivism or institutional theory, Marxism, and cultural economics. My own view is that the most productive route to a comparative economics should be based on the last or cultural approach. This turns out to be a critique and analysis of our own Western views as well as a different way of thinking about "things economic". At the end of the course we will move toward an integration of the four approaches.

**Class time:** 80% lecture, 10% discussion, 10% films and slides

**Workload:** 90 pages of reading per week, 2 papers

**Grade:** 35% mid-quarter exam(s), 65% final exam

**Exam format:** essay

### ANTH 5960 SENIOR SEMINAR: WHO OWNS THE PAST?

(Sec 1) prereq sr maj, 4 cr

Instructor: ARNOLD B

Dist Req: none

This course examines a number of issues relating to the study, interpretation, presentation and conservation of the past which are becoming more and more important in an increasingly politicized global environment. Why preserve the past, and in what form? Should prehistoric relics be narrowly conceived or treated in the broader context of all cultural relics? How has the past been used and abused for political purposes in different historical and cultural contexts? To what extent have administrative policies and racist attitudes towards indigenous peoples alienated indigenes from anthropologists? How do museums, collections, the restitution of cultural property and the illicit traffic in relics contribute to this situation? What is being done to encourage communication between opposing interested parties in the ongoing struggle for control of the past? We will be looking at case studies from Nazi Germany, Australia, New Zealand, the United States, Central Europe, South Africa, Zimbabwe, Central and South America and a number of other contexts.

**Class time:** 25% lecture, 25% discussion, 50% oral presentations by students

**Workload:** 200 pages of reading per week, 5 papers, 1 final paper  
**Grade:** 40% final exam, 20% written reports/papers, 20% in-class presentations, 20% class participation

**Exam format:** no exams; oral presentations, 5 short papers and final paper

## ARTS (STUDIO)

### ARTS 1520 PRINTMAKING: LITHOGRAPHY

(Sec 1-2) max 8 cr, 4 cr

Instructor: KREPPS J

Dist Req: (CLA: D) (IT: D) (CSOM: D)

Introduces students to the creative potential of lithography as a visual form of expression. The interrelationship of process-image-idea are investigated through structured areas, yet representative of students' personal concerns. This course sensitizes artists to those qualities unique to the print and its expanding role in visual communications.

**Class time:** 40% lecture, 30% discussion, 40% laboratory

**Workload:** 1 exam, 1 paper, assigned readings relative to topic

**Grade:** 10% mid-quarter exam(s), 30% class participation, 60% comprehensive portfolio

**Exam format:** short answer: terms, history, safety, practical application. Midquarter portfolio.

### ARTS 1701 PHOTO MEDIUM

(Sec 1-2) 4 cr

Instructor: ROSSI L

Dist Req: (CLA: D) (IT: D) (CSOM: D)

This course will introduce the student to black and white photography. Through the use of demonstrations, slide lectures, reading, group critiques and independent lab time the student creates a portfolio of prints. Basic 35 mm shooting, processing and developing is part of the course work. A great percentage of the students' time is spent in the lab, learning and refining techniques. The history of photography is an integral part of this class. Photographic genres are the context for the assignments.

**Class time:** 40% lecture, 20% discussion, 40% laboratory

**Workload:** 10 pages of reading per week, 1 exam, photographic projects

**Grade:** 20% mid-quarter exam(s), 40% special projects, 30% lab work, 10% class participation

**Exam format:** multiple choice, true/false, essay

### ARTS 3430 PAPER: PULP TO PLASTIC EXPRESSION

(Sec 1-2) max 12 cr; prereq 1401, 1xxx level studio arts, 4 cr

Instructor: KREPPS J

Dist Req: none

This course explores the wide range of possibilities of handmade paper as a vehicle for creative expression. The inseparable aspects of hands-on process, thought and expression being shaped into any form. Students experiment with various plant fibers and explore approaches to formation - from the historical mould and deckle to innovative applications of pulp spraying and casting.

**Class time:** 50% lecture, 30% discussion, 20% laboratory, includes demonstration

**Workload:** 1 exam, assigned readings

*The distribution requirement (Dist Req) information is only valid for CLA, IT and CSOM and for groups A, B, C and D.*

*Look for UCIP on the University Computer Network via Gopher*

**Grade:** 10% mid-quarter exam(s), 30% class participation, 60% comprehensive portfolio presentation

**Exam format:** short answer: history, terms, safety, practical applications

### ARTS 5590 ADVANCED ENTRY: PRINTMAKING

(Sec 11) max 16 cr; prereq #, Δ, 4 cr

Instructor: KREPPS J

Dist Req: none

This course allows the students to investigate the flexibility of printmaking - drawing upon their maturity from other disciplines. Meets concurrently with context of offered course, yet enables great in-depth investigation.

**Class time:** 40% lecture, 30% discussion, 30% laboratory

**Workload:** 1 exam, 1 paper, portfolio - midquarter and final

**Grade:** 10% mid-quarter exam(s), 30% class participation, 60% portfolio of visual research

**Exam format:** short answer: history, terminology, safety, practical application

### ARTS 5710 PHOTOGRAPHY

(Sec 1) max 16 cr; prereq 12 cr of 3710 or #, 4 cr

Instructor: ROSSI L

Dist Req: none

This course is intended to allow the advanced student of photography an opportunity to explore an independent project of choice, in-depth. Through slide lectures, field trips, demonstrations and group critiques the student learns to articulate ideas visually and verbally. A research paper relating to the individual's project is expected in addition to this. Choice of project dependent upon faculty approach (i.e. student's time limitations, knowledge of materials, complexity of research). Individual and group critiques help meet project's goals.

**Class time:** 30% lecture, 50% discussion, 20% laboratory

**Workload:** 1 paper, 3 articles per quarter reading

**Grade:** 20% written reports/papers, 50% special projects, 20% in-class presentations, 10% class participation

**Exam format:** final portfolio (independent visual project)

## ART HISTORY

### ARTH 3014 ART OF INDIA

(Sec 1-4) 4 cr

Instructor: ASHER F

Dist Req: (CLA: D) (IT: D) (CSOM: D)

The course will introduce students to the art and culture of India through lectures illustrated by slides. Material that will be considered includes the remarkable cities of the Harappan culture (the earliest known urban developments in India), the establishment of Buddhism and early Buddhist art, the development of the Hindu temple, the great monuments of Islamic India including the Taj Mahal, and finally the place of India's art and architecture in an international culture of the twentieth century. No previous work on India or art history is expected. There will be midquarter exam and a final as well as a brief research paper.

**Class time:** 100% lecture

**Workload:** 30 pages of reading per week, 2 exams, 1 paper, study of illustrations, class attendance important

**Grade:** 30% mid-quarter exam(s), 35% final exam, 35% written reports/papers

**Exam format:** short essay

### ARTH 3017 ISLAMIC CULTURE

(Sec 1) 4 cr

Instructor: ASHER C

Dist Req: (CLA: D) (IT: D) (CSOM: D)

Despite the fact the the Islamic world has almost daily impact on the lives of Americans, there is probably no civilization or culture less well understood. Great monuments and paintings of the Muslim world extend from Spain, across north Africa, through the Middle East and India to China. Literature, too, comes from a geographical spread equally as wide. Even today, adherents of Islam form the majority population in countries comprising almost a quarter of the earth's land mass. Yet when American think of the Islamic world, too often the dominant image is that of Muslim militants, with little sensitivity to the great ideas and cultural expressions--art and literature--that form the foundation of Islam. This course seeks to put in perspective that cultural background to the modern Islamic world which is often said to be one of unity within diversity. We will commence by reading poetry from pre-Islamic Arabia, the Quran, and by examining the Dome of the Rock to understand the very basis of Islam. We will then read literature and examine artistic forms from a variety of periods and geographical areas in our attempt to understand unifying principles and themes throughout this diverse realm.

**Class time:** 75% lecture, 25% discussion

**Workload:** 15 pages of reading per week, 2 exams, 1 paper

**Grade:** 33% mid-quarter exam(s), 33% final exam, 33% written reports/papers, class participation will help tremendously

**Exam format:** short essay

### ARTH 3942 SURVEY OF AMERICAN INDIAN ARTS

(Sec 1) §AmIn 3242, 4 cr

Instructor: LIBERTUS R

Dist Req: none

This course is designed to acquaint students with American Indian arts from pre-contact to contemporary times. It focuses on materials, techniques and traditions that underlie the art form in various tribal regions of the United States. Historically, it discusses the influences from within tribes, the influences on art exerted by other tribes and eventually European influence. I use 'Native Arts of North America' by Christian Fiest and selected readings from books on library reserve on specific subjects. I also use educational videos such as 'Maria Martinez -Potter of the Pueblos' and others. We make one class field trip to the Anthropology Department to visit the Mimbres pottery collection (a pre-contact pottery culture).

**Class time:** 60% lecture, 10% closed-circuit TV, 25% discussion, 5% laboratory

**Workload:** 50 pages of reading per week, 2 exams, 1 paper, 1 special project - an art project

**Grade:** 25% mid-quarter exam(s), 30% final exam, 20% written reports/papers, 20% special projects, 5% class participation

**Exam format:** multiple choice, short essay, one larger essay question

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**ARTH 5783 ART OF ISLAMIC INDIA**

(Sec 1) 4 cr

Instructor: ASHER C

Dist Req: none

This course will explore the development of art and architecture in the Indian subcontinent during a period of Islamic domination into the colonial period. Included in our discussion will be the world famous Taj Mahal. This monument as well as others in its tradition can be considered as the ultimate representations of paradise on earth. Throughout the course we will consider what cultural and artistic changes occur when a ruling Muslim elite imposes itself on a majority non-Muslim population. The impact made will be studied not only on works created for the Muslim ruling class, but also on those made for the Hindu princely and military elite, many of whom played active administrative roles in successive Muslim regimes.

**Class time:** 75% lecture, 25% discussion**Workload:** 15 pages of reading per week, 2 exams, 1 paper**Grade:** 33% mid-quarter exam(s), 33% final exam, 33% written reports/papers**Exam format:** essay, short essay**ASTRONOMY****AST 1011 DESCRIPTIVE ASTRONOMY**

(Sec 1-4) 4 cr

Instructor: STAFF

Dist Req: (CLA: B) (IT: B) (CSOM: B)

This is an introductory course in descriptive astronomy for the non-science major. Central to the course is discussion of the techniques used by the physical sciences to explore and understand the natural world. Specific topics include the Earth as a planet, the solar system, the stars, the Milky Way galaxy, the realm of galaxies and the origin of the Universe. Emphasis is placed on understanding the underlying physical laws and processes that govern the Universe, rather than memorizing names and facts. Lectures by a faculty member are four credit hours a week. Course evaluation is based primarily on exams, and depending on the instructor, there may be an observational project due at the end of the term. No previous course work in physics, astronomy, or other sciences is required. Some mathematics, at the level of high school algebra, is occasionally used in the course. For laboratory credit, a separate 1 credit course, AST 1015 is offered.

**Class time:** 90% lecture, 10% discussion**Workload:** 30 pages of reading per week, 3 exams, 1 observational project**Grade:** 50% mid-quarter exam(s), 40% final exam, 10% observational project**Exam format:** multiple choice**AST 1015 DESCRIPTIVE ASTRONOMY LABORATORIES**

(Sec 1-18) §1025H; prereq high school algebra...high school trigonometry rec, 1 cr

Instructor: STAFF

Dist Req: (CLA: B) (IT: B) (CSOM: B)

An introductory laboratory course which follows roughly the material taught in the introductory lecture course AST 1011. May

be taken simultaneously with AST 1011. Will be difficult without this course unless student has a broad knowledge of astronomy. Uses math on the high school level (first year algebra, geometry and trigonometry), but no calculus. Class is primarily for non-science majors; students in CLA, CBS, and other colleges take it, and many get A's. For IT students we have a more challenging introductory lab course, AST 1025 generally taught in the Fall. Examples of experiments worked in class: lenses and telescope optics, atomic spectra, binary star orbits, expansion of the universe. The pedagogical goal of this course is to give students some hands-on experience with the tools and techniques of astronomical measurement. We want students to gain self-confidence with scientific reasoning and calculations. Class takes a lot of time for a one credit class, typically 2-4 hours per week plus the 2 hour class meeting each week for experiments, but most students enjoy the course, and they are glad to have taken it. It satisfies the current lab science requirement for most colleges.

**Class time:****Workload:** lab writeup (2 pgs) due after each experiment; study lab manual; observational project**Grade:****Exam format:** no exams**BIOCHEMISTRY****BIOC 3021 BIOCHEMISTRY**

(Sec 1) §Biol 5001; prereq Biol 1009, 8 cr organic chem, 4 cr

Instructor: ANDERSON J !!Stanley Dagley Distinguished Teacher!!

Dist Req: none

This is a one quarter survey of the fundamentals of biochemistry. Lectures consider the structure and function of proteins, nucleic acids, lipids, and carbohydrates; principles of chemical equilibria, enzyme catalysis, and bioenergetics; fundamental metabolic pathways, and the chemical nature of genetic information storage and transmission. The ultimate 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. The prerequisite reflects the strong emphasis on facility with organic chemistry. This course requires a lot of study effort on the part of the student. Studying should be done regularly throughout the term. Students who plan to major in biochemistry should enroll in the alternate three quarter series of courses, 5331, 5332 and 5333. Text: "Biochemistry" 3rd edition, by Lubert Stryer, W. A. Freeman and Company, 1988.

**Class time:** 100% lecture, complex diagrams from text will be projected on screen to facilitate presentation**Workload:** 70 pages of reading per week, 3 exams**Grade:** 67% mid-quarter exam(s), 33% final exam**Exam format:** short essays, problem solving, short answer, multiple choice, and writing complex chemical structure and metabolic pathways

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## BIOLOGY

### BIOL 1009 GENERAL BIOLOGY

(Sec 1-27) 5 cr

Instructor: STAFF

Dist Req: (CLA: B) (IT: B) (CSOM: B)

Introduction to the principles of biology. The cell, metabolism, heredity, reproduction, ecology, and evolution. Includes laboratory. Texts are 'Biology', Campbell, 2nd ed. (1990), 'Lectures in Biology', M. Simmons et al., 2nd ed. (1991-92), 'Introduction to Biology; Laboratory Exercises', R. W. Peifer, 5th ed. (1990). The 'Lectures in Biology' and laboratory manual are available from the Beckwith Copy Center on Washington Ave. All students are responsible for reading and complying with the information and instructions contained in the General Information section (pp iii-v) of 'Lectures in Biology'. Tutorial aid is available in P-176 Kolthoff during certain hours each day. Many students consider this a challenging course. High school chemistry is helpful.

**Class time:** 60% lecture, 40% laboratory

**Workload:** 60 pages of reading per week, 2 exams, 5 lab quizzes

**Grade:** 30% mid-quarter exam(s), 30% final exam, 40% quizzes

**Exam format:** quizzes - short answer, essay, problem solving; mid-quarter and final are multiple choice

### BIOL 1101 HEREDITY AND HUMAN SOCIETY

(Sec 1) §GCB 3002, no cr if taken after 5003 or GCB 3022, 4 cr

Instructor: FAN D

Dist Req: (CLA: B) (IT: B) (CSOM: B)

This course is an introduction to genetics for the non-science major. The emphasis is on human genetics with socially relevant examples used whenever possible. Genes and their expression into proteins are explained through the example of the disease of sickle cell anemia. Viruses and immunogenetics are examined through the example of the AIDS virus. Chromosomes, their transmission from cell to cell, and inheritance patterns include the discussion of colorblindness. Quantitative traits are studied using IQ as the example. Evolution and the roles of mutations and selection are examined through sickle cell anemia and hemophilia.

**Class time:** 75% lecture, 25% discussion

**Workload:** 3 exams

**Grade:** 50% mid-quarter exam(s), 50% final exam

**Exam format:** multiple choice

### BIOL 1951 BIOLOGY COLLOQUIUM

(Sec 2) 1 cr

Instructor(s): UNDERHILL J, OTHERS

Dist Req: none

Offered Mondays or Tuesdays in Minneapolis, and Wednesday in St Paul. Most students begin the Colloquium series in fall quarter and continue through spring, although one can begin the Colloquium any quarter. During Winter and Spring quarters the Colloquium course may be taken for two credits if the student is working on an independent project. Projects are optional but encouraged. They may be started after a student has been enrolled in the Colloquium for at least one quarter. Requirements: 1) attend large group seminars; 2) participate in your small group activities and offer ideas and suggestions to your student leader. If you must miss a

small group session, let your student leader know in advance; 3) keep a journal that will be reviewed by your student leader twice during the quarter. Each student leader has their own requirement regarding journal content; 4) for those planning to do an independent project, make sure you have spoken to a project coordinator and fully understand what is required of you.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

### BIOL 3003 INTRODUCTION TO COMPUTING IN BIOLOGY

(Sec 1) prereq 1008 or 1009 or equiv, declared biosci maj, Δ, 2 cr

Instructor: PHILLIPS J

Dist Req: none

This course provides hands-on use of microcomputers to introduce students in biology to how computers can help them manipulate data, prepare graphs and graphics, perform literature searches, prepare posters and reports, and communicate with others through the use of the computer network. The purpose of this course is to improve the computer literacy of students in biology and is designed for the student with little or no experience with computers. Topics include: introduction to the computer (Macintosh)-the basic functions of the computer-how to set up parameters of the computer; professional writing and presentations (word processing); organizing and manipulating data (spread sheets; databases); data manipulation, presentation of results in graphic form (graphing and graphics programs); information retrieval (e.g. literature searching in Medline, Current Contents, etc, sequence analysis data base searching) and networking, including electronic mail and file transfers; organization functions (e.g. Hypercard, Filemaker, etc.); simulations and animations-how to use and produce them; introduction to other computer systems (e.g. IBM, UNIX).

**Class time:** 99% hands on computing

**Workload:** need to practice new computing skills about 2 hr/week minimum

**Grade:** 50% special projects, 50% class participation

**Exam format:**

### BIOL 3011 ANIMAL BIOLOGY

(Sec 1-7) §1106; prereq 1009, Chem 1005, 5 cr

Instructor: KERR N

Dist Req: (CSOM: B)

This course has two 75 min lectures and two 100 min labs each week. The labs, meeting in groups of 18 taught by undergraduate TA's, center around a survey of animal kingdom. (Students who have already completed such a survey register for Biol 3111 instead). The lectures begin with discussion of animal phylogeny and embryology before turning to comparative animal physiology. The basis of nerve impulse, neurons, synapses, receptors, nervous system, and vertebrate brain are considered. Mechanisms of hormone action are followed by discussion of invertebrate and vertebrate hormones. Effector organs (chromatophores, bioluminescence, muscle, cilia), circulatory system, respiratory system, food gathering, digestion, osmoregulation and excretion complete the course. Performance objectives and lecture notes given in

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class. Several computer exercises complement lecture material. There is a Animal Physiology textbook and lab manual. Required for bio sci majors, also taken by pre-med as prep for MedCAT exam.

**Class time:** 90% lecture, 10% discussion

**Workload:** 20 pages of reading per week, 7 exams, compreh. final, 4 lecture quizzes, 2 practical exams in lab identification, known function

**Grade:** 37% final exam, 34% quizzes, 29% lab work

**Exam format:** multiple choice, fill in the blank, complete a diagram

### BIOL 3012 PLANT BIOLOGY

(Sec 1-5) §1103, 3812; prereq 1009, Chem 1005, 5 cr

Instructor: WICK S

Dist Req: (CSOM: B)

The textbook for this class is "Biology of Plants" by Raven et al. I try to involve class members in discussion as much as possible during lecture periods, and tend to focus on thinking through concepts. The first part of the course examines groups of plants and allied plant-like organisms, while the second part deals with development and physiological processes.

**Class time:** 30% lecture, 10% discussion, 60% laboratory

**Workload:** 2 exams, 1 paper, 1 laboratory research project done by pairs of students

**Grade:** 25% mid-quarter exam(s), 25% final exam, 25% written reports/papers, 25% quizzes

**Exam format:** essay, short answer, drawing of diagrams

### BIOL 3111 ANIMAL BIOLOGY

(Sec 1) §3011; prereq 1009, 1106, Chem 1005, 4 cr

Instructor: KERR N

Dist Req: none

A non-laboratory version of Biol 3011, for students who have already completed a survey of the animal kingdom laboratory. (See Biol 3011).

**Class time:** 90% lecture, 10% discussion

**Workload:** 20 pages of reading per week, 5 exams

**Grade:** 52% final exam, 48% quizzes

**Exam format:** multiple choice, fill in the blank, complete a diagram

### BIOL 3960H HONORS SEMINAR

(Sec 81-82) prereq Δ, 1 cr

Instructor: BARNWELL F !!Morse Alumni Teaching Award Winner!!

Dist Req: none

This is the second of two seminars required by the CBS Honors Program (The first meets in Fall Qtr and consists of student presentations on issues of science and society). Open only to students in the CBS Honors Program. Students present the results of their Honors thesis research to other honors students in a seminar setting. Emphasis is placed on effective communication; presenters are evaluated by their peers and expected to critique a videotape of their talk. The seminar also serves as an introduction to research opportunities and standards for students just entering the Honors Program. Grading is S/N.

**Class time:** 100% student presentations followed by class discussion

**Workload:** preparation of one class presentation

**Grade:** 80% in-class presentations, 20% class participation

**Exam format:** no exams

### BIOL 5003 GENETICS

(Sec 1) §GCB 3022, 5022; prereq 5001, 4 cr

Instructor: SIMMONS M !!Morse Alumni Teaching Award Winner!!

Dist Req: none

This course presents an introduction to classical, molecular and population genetics, emphasizing problem solving and the analysis of experimental data. Although it is a lecture course, the instructor is fond of asking students questions during the class sessions and encourages students to participate through questions, comments and discussion. The textbook is "Principles of Genetics" 8th edition, by E. J. Garner, M. J. Simmons and D.P. Snustad. The text is supplemented by a few handouts.

**Class time:** 100% lecture, Students must also participate in a 2 hr discussion with peers near end of term

**Workload:** 40 pages of reading per week, 2 exams, 1 paper, problems (not graded)

**Grade:** 33% mid-quarter exam(s), 33% final exam, 33% special projects, write article or research proposal and critically review those of peers-meeting with peers

**Exam format:** multiple choice, and short answer, including problems. Copies of previous exams are provided to all students as learning aids.

### BIOL 5013 MICROBIOLOGY

(Sec 1) §MicB 3103, 5105, VPB 3103; prereq 5001, 5 cr

Instructor: DUNNY G

Dist Req: none

This course uses lectures, discussions, and laboratories to provide students with an overview of microbiology, focusing on the structure, metabolism, genetics, and ecology of bacteria. Introductory immunology and pathogenic microbiology are also covered. The text is 'Microbiology' by Prescott, Harley and Klein.

**Class time:** 30% lecture, 20% discussion, 50% laboratory

**Workload:** 50 pages of reading per week, 2 exams, 1 paper, 4 take-home quizzes, lab reports

**Grade:** 20% mid-quarter exam(s), 30% final exam, 10% written reports/papers, 40% lab work

**Exam format:** mixture or objective and essay

### BIOL 5125 RECOMBINANT DNA LABORATORY

(Sec 1) §5825, MicB 5125; prereq application necessary, Δ, 4 cr

Instructor: DAS A

Dist Req: none

A broad overview of recombinant DNA methods, e.g. plasmid isolation, gene cloning, DNA sequence analysis, blotting techniques and site-specific mutagenesis, is provided.

**Class time:** 20% lecture, 80% laboratory

**Workload:** 20 pages of reading per week, 4 lab write-ups

**Grade:** 40% final exam, 50% written reports/papers, 5% lab work, 5% class participation

**Exam format:** take home exam; problem solving

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**BIOL 5950 SPECIAL TOPICS IN BIOLOGY**

(Sec 5) 1 cr

Instructor: STAFF

Dist Req: none

Goal of this course is to encourage biology instructors to consider and evaluate their beliefs and practices as teachers. The course facilitates sharing of ideas & experiences relevant to teaching biology among graduate students, University faculty, community college and high school faculty. It provides instructors with the opportunity to practice techniques that may make them more effective and with ideas with which to invigorate their courses. Course will be taught in seminar format with a new topic of discussion each week. Discussion groups will sometimes split up to focus on specific interests and needs of each type of teacher. Speakers from within and outside the University will be invited to participate in weekly discussions. A teaching journal, course evaluation, classroom observation and final group project are required assignments for 2 S/N credits. An addition credit may be arranged with permission of seminar coordinators for extra work. Class size limited to 25 students. Teachers from outside the University of Minnesota are encouraged to participate. There will be no required ratio of teaching assistants to community teachers as the seminar activities will be tailored to the needs and interests of those taking course.

**Class time:** 80% discussion, 20% group work**Workload:** 1 paper, weekly short take-home writing assignments**Grade:** 10% special projects, 60% class participation, 30% final written project with presentation**Exam format:****BUSINESS ADMINISTRATION****BA 3000 ORIENTATION FOR MANAGERS**

(Sec 2) prereq Schl of Mgmt stu or Schl of Mgmt Undergrad Studies Office approval, 2 cr

Instructor: RINEHART G

Dist Req: none

The course is designed to provide an integrated approach to personal and professional development. Its goal is to help students become personally effective as students and future contributors to organizations. Through written journal assignments, readings, exercises and class discussions, students will consider how individual characteristics influence decisions and choices. Students will have the opportunity to assess their strengths and weaknesses, to explore their interests, to discover U of M resources available to them, and to become part of CSOM's community. The course is coordinated by the Undergraduate Studies Office and will feature presentations by staff from several University resource centers and by faculty from the Carlson School. The course is premised on the belief that the better you understand yourself, the more productive you will be, and the more effective you will be in working with and leading others. Given this focus, it is clear that you will benefit from the course in direct proportion to the extent to which you seriously involve yourself in the issues and topics being considered.

**Class time:** 30% lecture, 30% discussion, 40% outside speakers, group activities**Workload:** 20 pages of reading per week, weekly journals (3-5 pages per week)**Grade:** 50% written reports/papers, 50% class participation**Exam format:** no exams**CHEMICAL ENGINEERING****CHEN 5101 PRINCIPLES OF CHEMICAL ENGINEERING I**

(Sec 1-6) prereq 5001 or ¶, IT stu, 4 cr

Instructor: MCCORMICK A

Dist Req: none

Performance on homework and exams will strongly depend on your attendance of all lectures and recitations. All lectures and recitations are required. Lectures will be used to review the fundamentals discussed in the chapter(s) at hand, to discuss some advanced topics, and to introduce examples. Recitations will be used to solve problems assigned in advance (and which are related to the currently assigned homework problems) and to review specifics not covered in lecture. Homework problems are meant to expose you to the various types of problems that you will see on exams and to introduce material which will be resumed in subsequent courses.

**Class time:** 60% lecture, 40% discussion**Workload:** 20 pages of reading per week, 4 exams, 10 homework sets approx. 4 hours each**Grade:** 60% mid-quarter exam(s), 25% final exam, 15% problem solving**Exam format:** standard engineering exam, 3-4 problems are set, solution is open-ended. May be the first time some students will see this exam format, but will continue seeing it in eng. courses.**CHEMISTRY****CHEM 1001 GENERAL PRINCIPLES OF CHEMISTRY**

(Sec 1-9) §1003, 1008; for students not passing chem plcmnt exam; prereq h.s. chem or equiv, 2 yrs h.s. math, 4 yrs rec, ... h.s. physics rec, 4 cr

Instructor: BRITTON D

Dist Req: (CLA: B) (CSOM: B)

This course is intended for students who need, or would like, a slower introduction to chemistry than is provided by Chem 1051-1052. For most students this course will be followed by 1051. For nursing and forestry majors it will be followed by 1002, which is a short introduction to organic chemistry.

**Class time:** 100% 3 lectures/week; 1 3 hour lab/week; 1 recitation with TA/week**Workload:** 40 pages of reading per week, 3 exams, final lab reports on 6-7 experiments**Grade:** 40% mid-quarter exam(s), 40% final exam, 20% lab work**Exam format:** problems, short-answer questions, some multiple choice**CHEM 1051 CHEMICAL PRINCIPLES I**

(Sec 1-48) primarily for stu majoring in sci or eng; prereq 1001 or passing placement exam, 4 cr

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**Instructor:** STAFF

**Dist Req:** none

**Course topics:** atomic theory, periodic properties of the elements, chemical calculations, chemical thermodynamics, development of structural concepts, geometry of molecules, bonding theory and the behavior of gases.

**Class time:** 40% lecture, 45% laboratory, 15% recitation

**Workload:** 50 pages of reading per week, 4 exams

**Grade:** 20% lab work, 80% 80% between midquarter and final exam

**Exam format:** multiple choice, short answer, problems

## CHEM 1052 CHEMICAL PRINCIPLES II

(Sec 1-18) prereq 1051, 4 cr

**Instructor:** STAFF

**Dist Req:** none

**Course topics:** Behavior of liquid state, solid state and materials, dynamics, behavior of solutions, acids and bases, descriptive chemistry of elements and compounds.

**Class time:** 40% lecture, 45% laboratory, 15% recitation

**Workload:** 50 pages of reading per week, 4 exams

**Grade:** 20% lab work, 80% 80% between midquarter and final exams

**Exam format:** multiple choice, short answer, problems

## CHEM 5133 CHEMICAL INSTRUMENTATION AND ANALYSIS LECTURE

(Sec 1-2) prereq chem maj, 1133, 5534, 5535, or #, 3 cr

**Instructor:** EVANS J

**Dist Req:** none

**Course covers course organization, electronic measurements by chemical instrumentation, interaction of electromagnetic radiation with matter, analytical molecular spectroscopy, analytical atomic spectroscopy, mass spectrometry, introduction to other separations techniques, gas chromatography, liquid chromatography and related techniques, introduction to electrochemistry, potentiometry, coulometry, and voltammetric methods.**

**Class time:** 75% lecture, 25% problem solving/recitation

**Workload:** 3 exams, 8 problem sets, reading varies per week

**Grade:** 25% mid-quarter exam(s), 25% final exam, 50% problem solving

**Exam format:** essay and problem solving

## C H I N E S E

### CHN 3021 INTERMEDIATE MODERN CHINESE

(Sec 1-2) prereq 1013, 5 cr

**Instructor:** DECKER M

**Dist Req:** none

CHN 3021 is the first in a three quarter sequence of second year Mandarin Chinese. The primary textbook is "Kaiming Intermediate Chinese". This book is a conversation text which provides extensive dialogues in natural speech followed by various oral exercises. A videotape of the dialogue is used in class. The text is supplemented by reading passages selected by the instructor in order to build students' ability in written Chinese. Classroom instruction includes drill, question and answer sessions, grammar instruction, and translation. Requirements include frequent writ-

ten quizzes, homework and composition writing, and oral performances or interviews. All aspects of language - reading, writing, listening and speaking are emphasized.

**Class time:** 10% lecture, 90% see detail description

**Workload:** 20 pages of reading per week, 1 exam, 2-3 short quizzes/wk, 1 written homework/wk, 1 oral performance/2 wks, 1-2 unit quiz/2 wk

**Grade:** 20% final exam, 16% written reports/papers, 30% quizzes, 25% in-class presentations, 2% class participation, 7% short in-class quizzes (5-10 minutes)

**Exam format:** translate Eng-Chi to Chi-Eng; situational questions; new text reading with content questions; listening comprehension; character recognition and definition; new things periodically

### CHN 3031 INTRODUCTORY CLASSICAL CHINESE

(Sec 1) prereq 3023 or #, 4 cr

**Instructor:** WANG S

**Dist Req:** none

This is an introductory course of Classical Chinese. In the first quarter the emphasis will be on the grammar of the language. This will be done inductively through reading exemplary texts. Exercises will be used to simulate use of the language in appropriate contexts.

**Class time:** 15% lecture, 85% discussion

**Workload:** 3 exams

**Grade:** 25% mid-quarter exam(s), 25% final exam, 25% quizzes, 25% class participation

**Exam format:** fill in translation

## C I V I L E N G I N E E R I N G

### CE 3020 COMPUTER APPLICATIONS IN CIVIL ENGINEERING I

(Sec 1) prereq civil engineering, geo-engineering or mining engineering maj, Math 1231, 4 cr

**Instructor:** VOLLER V

**Dist Req:** none

Computer Applications in Civil Engineering is focused on helping students learn how to formulate and solve civil engineering problems with the assistance of computer-based tools. In addition to learning the basics of writing computer programs in Pascal, students will learn how to use spreadsheets, databases and equation solvers. The entire course will be problem-based; that is, the emphasis will be on formulating and solving problems. Overall goals and expectations: 1) learn about civil engineering computer applications, master the concepts, principles and heuristics, develop skills for formulating and solving engineering problems; 2) improve skills for using tools (computers) for modeling and problem solving; 3) improve writing and speaking skills; 4) improve skills for working effectively with others. Criteria based grading.

**Class time:** 70% lecture, 10% laboratory, 20% group work

**Workload:** 2 exams, 5 papers

**Grade:** 25% mid-quarter exam(s), 25% final exam, 50% written reports/papers

**Exam format:** 3 problems; as a study aid a mock example exam is given out as a homework the week before.

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### CE 3700 HOW TO MODEL IT: BUILDING MODELS TO SOLVE ENGINEERING PROBLEMS

(Sec 1) prereq IT Honors or #, 4 cr

Instructor: SMITH K

Dist Req: none

Building Models to Solve Engineering Problems will focus on problem formulation, design and construction of models, and drawing conclusions from modeling results. Students will work in small groups on a number of problems selected from various engineering contexts. Students will learn how to use computer-based modeling tools, including spreadsheets and equation solvers. The entire course will be problem-based; that is, the emphasis will be on formulating and solving problems. Numerous problems will be given to introduce and help students learn engineering and modeling concepts, including: identification of variables and parameters, solution estimation, levels of representation, Occam's razor, modeling resolution, importance of purpose and context, time dependence, bounds, lumped parameters, differences between deterministic and stochastic models, use of diagrams and schematics for formulation, solution, and explanation, identification and incorporation of constraints, role of optimization, model verification and sensitivity analysis, how to compare models, representing and exploring trade-offs, qualitative and quantitative models, algorithm, heuristics, trade-offs, best change, state-of-the-art, rule to thumb, order of magnitude.

**Class time:** 30% lecture, 30% discussion, 40% small group problems solving

**Workload:** 20 pages of reading per week, 1 paper, 5 group projects

**Grade:** 25% written reports/papers, 25% special projects, 50% problem solving

**Exam format:**

### CE 5097 ADVANCED DESIGN, ANALYSIS, RESEARCH OR TUTORIAL IN CIVIL ENGINEERING

(Sec 1) prereq approval of faculty adviser, 4 cr

Instructor: HEPWORTH M

Dist Req: none

Physical and chemical principles and their application to unit operations and processes for recovery and recycle of solid and hazardous wastes. Remediation techniques on solid and hazardous wastes originating from manufacturing industries, municipal waste treatment plants, electric power utilities, and the mining industry; industrial speakers. Text: (available from Kinko Copy Center Dinky-Dome) "Vesilind". This book is out of print but the author will allow it to be copied with no royalty. It is of limited value, but for the price of copying, a useful supplement to the course.

**Class time:** 60% lecture, 20% discussion, 10% laboratory, 10% invited speakers

**Workload:** 20 pages of reading per week, 4 exams, 1 paper, homework assignments

**Grade:** 25% mid-quarter exam(s), 50% final exam, 25% written reports/papers

**Exam format:** multiple choice and problem solving

### CE 5410 OPEN CHANNEL HYDRAULICS

(Sec 1-2) prereq 3400, 5401 or #, IT or grad stu, 4 cr

Instructor: ARNDT R

Dist Req: none

This course builds on the principles of fluid mechanics learned in CE 3400. Course content covers the broad area of mechanics of flow in open channels including gradually varied, spatially varied and rapidly varied flow. Unsteady flow (waves and surges) and flow in alluvial channels are also covered. The open channel hydraulics laboratory is a substantial part of the course and is planned to complement the lectures. The objectives of the lab are to a) illustrate some principles of free surface flow, b) provide some experience in field and laboratory work and c) to become familiar with computer applications.

**Class time:** 60% lecture, 40% laboratory

**Workload:** 35 pages of reading per week, 3 exams, 6 lab reports

**Grade:** 40% final exam, 40% quizzes, 20% lab work

**Exam format:** 4 problems

### CE 5425 GROUNDWATER MECHANICS

(Sec 1) prereq 3400 or #, IT or grad stu, 4 cr

Instructor: STRACK O

Dist Req: none

Basic equations. Shallow confined and unconfined flows, two-dimensional flow in the vertical plane, and transient flow. Flow from rivers and lakes toward wells. Determination of streamlines and pathlines in two and three dimensions. Introduction to contaminant transport. Elementary computer modeling. Text used: "Groundwater Mechanics", O.D.L. Strack, 1989. The objective of the course is to instruct in the use of elementary methods to solve groundwater flow problems as encountered in the field.

**Class time:** 100% lecture

**Workload:** 20 pages of reading per week, 2 exams, 10 hours homework

**Grade:** 25% mid-quarter exam(s), 40% final exam, 35% quizzes

**Exam format:** 2 problems per exam

### CE 5501 ANALYSIS AND DESIGN OF WASTEWATER SYSTEMS

(Sec 1) prereq Chem 1005, 3400 or #, IT stu or grad, 4 cr

Instructor: MAIER W

Dist Req: none

Text: Metcalf and Eddy. Planning and engineering design considerations in developing wastewater disposal systems for urban centers. Volumes and quality of waste streams, treatment and ultimate disposal of domestic and industrial wastewaters, storm water run-off. Environmental effects, cost, and political aspects of ultimate disposal.

**Class time:** 75% lecture, 25% laboratory

**Workload:** 15 pages of reading per week, 2 exams, lab reports, homework problems

**Grade:** 40% mid-quarter exam(s), 20% final exam, 25% lab work, 15% problem solving

**Exam format:** problems and multiple choice and definitions

### CE 5504 MASS TRANSPORT WITH ENVIRONMENTAL APPLICATIONS

(Sec 1) prereq IT upper div or grad stu, 3400, 4 cr

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Instructor: GULLIVER J

Dist Req: none

This course is designed for IT seniors and graduate students who are interested in the principles of mass transport and their application to environmental systems. The course deals with the hydrodynamics of mixing and transport, as well as the interaction of mixing and various reaction rate processes. Applications in the course will include water and wastewater treatment, groundwater pollution, and transport and mixing in rivers, lakes, and reservoirs.

**Class time:** 90% lecture, 10% discussion

**Workload:** 15 pages of reading per week, 2 exams, home problems approximately 5 hours/week

**Grade:** 30% mid-quarter exam(s), 40% final exam, 30% problem solving

**Exam format:** problems: all exams are open book-open notes

### CE 5600 LINEAR STRUCTURAL SYSTEMS

(Sec 1-2) prereq AEM 1015, 3016, IT stu or grad, 4 cr

Instructor: GALAMBOS T

Dist Req: none

This course focuses on the analysis of linear elastic structures such as trusses, beams and frames. It starts with the analysis of internal forces and deformations in statically determinate structures. Several of the most common methods of analysis are presented in this context. They form a basis for various techniques used in the analysis of more complicated, statically indeterminate structures, which are introduced in the second half of the course. This course is a prerequisite for several structural design courses. Design considerations are introduced by pointing out how the results obtained are used in the process of structural design. Emphasis is placed on the understanding of basic principles and on solving practical problems. Text used last time: "Elementary Theory of Structures" by Yuan-Yu Hsieh.

**Class time:** 80% lecture, 20% discussion

**Workload:** 15 pages of reading per week, 3 exams, weekly papers, weekly quizzes; homework consists of problem solving

**Grade:** 30% mid-quarter exam(s), 35% final exam, 20% written reports/papers, 15% quizzes

**Exam format:** solving about 4 problems within 2 hour exam

### CE 5602 TOPICS IN STRUCTURAL MECHANICS

(Sec 1) prereq 5600, AEM 3036, IT upper div stu or grad, 4 cr

Instructor: SHIELD C

Dist Req: none

This course is a continuation of the material introduced in deformable body mechanics. The topics to be covered include introduction to the plane theory of elasticity, failure criteria, energy methods in structural mechanics, torsion of beams, unsymmetric bending of beams, beams on elastic foundation. Text: Cook and Young, "Advanced Mechanics of Materials".

**Class time:** 100% lecture

**Workload:** 1 exam, 1 homework per week

**Grade:** 30% mid-quarter exam(s), 35% final exam, 35% problem solving

**Exam format:** problem solving; derivations

### CE 5610 DESIGN OF METAL STRUCTURES: INTRODUCTION

(Sec 1-2) prereq 5600, 5603, upper division IT stu or grad, 4 cr

Instructor: HAJJAR J

Dist Req: none

Study of design codes for steel structures, including load factor and working stress philosophies of design; material properties of structural metals; loads on civil structures; design of tension, compression, and flexural members and their connections. At recitation the professor presents solutions to design problems and discusses the procedures for designing steel structures with the students. A problem set consisting of a few design problems is due every week or two, and there is generally a final project consisting of the design of a small steel structure which is carried out in teams of two. Texts: McCormac, J.C., "Structural Steel Design: LRFD Method" 1989; AISC "Manual of Steel Construction: Load and Resistance Factor Design" 1st edition, 1986.

**Class time:** 80% lecture, 20% recitation/problem set solution

**Workload:** 20 pages of reading per week, 2 exams, 8 number of problem sets and projects

**Grade:** 25% mid-quarter exam(s), 35% final exam, 10% special projects, 30% problem solving

**Exam format:** solution of several design problems

## CLASSICAL CIVILIZATION

### CLCV 3950 TOPICS IN CLASSICAL CIVILIZATION: ISLAMIC CULTURE

(Sec 1) §ArtH 3017; prereq CLCV maj or #, 4 cr

Instructor: ASHER C

Dist Req: (IT: D)

This course will focus on the history of art from the inception of Islam to the 17th century throughout the Islamic world from Spain to India concentrating on developments in the Middle East. Attention will be given to the development of architecture, the most significant of all the Islamic art forms, as well as to painting and the so-called minor arts, especially ceramics. Special consideration will be given to the cultural, political and religious milieu under which individual works and monuments were created. In addition, the role of the patron will be considered when discussing the history, symbolic function and appearance of any work of art. While the material will be approached geographically and chronologically, an attempt will be made throughout the entire course to determine what features and themes unify the diverse artistic trends and styles produced throughout the Islamic world. Texts: John Hoag, 'Islamic Architecture', Barbara Brend, 'Islamic Art'.

**Class time:** lecture in class, discussion in sections

**Workload:** 10 pages of reading per week, 2 exams, 1 paper, class attendance is important

**Grade:** 33% mid-quarter exam(s), 33% final exam, 33% written reports/papers, improvement is rewarded

**Exam format:** short essays

## COMMUNICATION DISORDERS

### CDIS 3100 CLINICAL AND RESEARCH OBSERVATION

(Sec 1) prereq A, 2 cr

*The distribution requirement (Dist Req) information is only valid for CEA, IT and CSOM and for groups A, B, C and D.*

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Instructor(s): STARR C, MOLLER K

Dist Req: none

This course offers students interested in speech pathology an opportunity to observe clinical activities in a multidisciplinary setting. Students spend 4 hours per week in the clinic. They have opportunities to participate in the discussions of persons being seen. They write a brief paper summarizing their observations.

**Class time:** 100% observations-discussion

**Workload:**

**Grade:** 5% written reports/papers, 95% observations-discussions

**Exam format:**

### CDIS 3100 CLINICAL AND RESEARCH OBSERVATION

(Sec 2) prereq Δ, 2 cr

Instructor: HAROLDSON S

Dist Req: none

This registration offers the student an opportunity to observe and participate in two clinical areas: stuttering and laryngectomy. The format is primarily group process in which adult clients gather in a setting focused on changing communication behavior. Some additional opportunities may exist off campus providing further exposure to different communicative settings. Students must earn a minimum of 25 hours of contact during a given quarter. Grading is S/N only.

**Class time:** 100% observation and interaction with clients

**Workload:**

**Grade:**

**Exam format:**

### CDIS 3100 CLINICAL AND RESEARCH OBSERVATION

(Sec 3) prereq Δ, 2 cr

Instructor(s): STARR C, MOLLER K

Dist Req: none

This course is primarily for clinical observation. Students observe speech pathologies and graduate students carrying out evaluations and treatment of persons with voice disorders. Approximately 4 hours per week are required. Hours are scheduled on late Thursday afternoons, or when clients are available. This course is taken by students majoring in communication disorders.

**Class time:** 90% clinical observation

**Workload:** 1 paper

**Grade:** 15% written reports/papers, 85% attendance and discussion in clinics

**Exam format:**

### CDIS 3100 CLINICAL AND RESEARCH OBSERVATION

(Sec 5) prereq Δ, 2 cr

Instructor: CARLSTROM J

Dist Req: none

This observation is open to only one student per quarter and is designed for students interested in pursuing an M.A. in audiology. Twenty-five hours of clinical observation are accrued. The student is expected to document observation experiences and write a short summary (2-4 pages) upon completion of the course. Completion or concurrent registration of CDIS 5701 (Hearing Loss and

Audiometry) is advised. Grading is S-N only.

**Class time:** 10% discussion, 90% observation of clinical practice in audiology

**Workload:** 1 paper

**Grade:** 10% written reports/papers, 90% class participation

**Exam format:** no exams

### CDIS 3100 CLINICAL AND RESEARCH OBSERVATION

(Sec 6) prereq Δ, 2 cr

Instructor: VAN DEUSEN D

Dist Req: none

This registration is designed for undergraduate students seeking observation of audiological evaluations. Twenty-five hours of observation are accrued on or off campus, depending on the students interests. This course is ideal for students considering pursuit of a master's degree in audiology. Completion or concurrent registration of CDIS 5701 (Hearing loss and Audiometry) is advised. Students are required to submit a 3-5 page paper upon completion of the course. Grading is S-N only.

**Class time:** 100% observation and discussion

**Workload:** 1 paper, 25 hours observation

**Grade:** 100% satisfactory completion of observation log and paper

**Exam format:** no exams

### CDIS 3100 CLINICAL AND RESEARCH OBSERVATION

(Sec 7) prereq Δ, 2 cr

Instructor: DOYLE S

Dist Req: none

This two credit (S-N only) course provides an opportunity for students to observe evaluation and intervention sessions, for children or adults who have mild to moderate speech and language deficits. Students observe these sessions in an observation facility adjacent to the test room. Students are required to complete short summaries of their observations and prepare a short paper at the end of the quarter. Students are required to complete 25 hours of observation during the quarter.

**Class time:** 10% discussion, 90% observation of clinical sessions

**Workload:** 1 paper, A brief summary form is required for each observation

**Grade:** 100% completion of observation hours and paper

**Exam format:**

### CDIS 3100 CLINICAL AND RESEARCH OBSERVATION

(Sec 7) prereq Δ, 2 cr

Instructor: HINDERSCHAIT L

Dist Req: none

Students will meet with me at the beginning of the quarter (or, preferably, the end of the previous quarter). They will let me know what some of their interests are in the field of speech-language pathology. I will then provide the names and phone numbers of approximately 3 speech-language pathologists in medical, school, and/or rehabilitation sites in the community. Students will set up observations with these professionals. Students need to complete a minimum of 25 hours of observation. A log of these experiences will be required. A short paper (3-5

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pages), describing what the student learned from these experiences, is also required. Grading is S/N only.

**Class time:** 100% arranged observation in the community

**Workload:** 100% observing off-campus an average of 2-3 hours/week

**Grade:** 100% satisfactory completion of observation log and paper

**Exam format:**

### CDIS 5301 INTRODUCTION TO ACOUSTICS

(Sec 1) 5 cr

Instructor: SPEAKS C !!CLA Distinguished Teacher Award!!

Dist Req: none

Why is a "sonic boom" created when an airplane exceeds the speed of sound? Why is a foghorn designed to emit a low-pitched sound instead of a high-pitched whistle? If you are hunting in the woods, why is your distant prey more likely to hear you if it is downwind from you? How do "whispering galleries" work? In what ways do echoes off a canyon wall behave like billiard balls bounding off rails on the billiard table? When you contemplate purchasing a stereo system, what does the salesperson mean by terms such as frequency response, noise floor, dynamic range, signal-to-noise ratio, decibels, percentage harmonic distortion, and so on? The course is designed to teach the fundamental concepts of acoustics, particularly for students in the behavioral and social sciences.

**Class time:** 90% lecture, 10% demonstration

**Workload:** 30 pages of reading per week, 3 exams

**Grade:** 67% mid-quarter exam(s), 33% final exam

**Exam format:** multiple-choice

### CDIS 5303 PHONETICS LABORATORY

(Sec 1) 2 cr

Instructor: BROEN P

Dist Req: none

This course has two major goals. When you complete the course you should be able to phonemically transcribe American English at a rate of 4 to 8 words per minute using a modified form of the International Phonetic Alphabet (IPA) and you should understand, in a general way, how the sounds of speech are produced and the variations that normally occur in their production. In addition, you will have an opportunity to transcribe speech produced by individuals with a variety of speech disorders.

**Class time:** 50% lecture, 50% in-class transcription practice

**Workload:** 3 exams, work in the Learning Resource Center - transcription, two mid-quarter exams.

**Grade:** 60% mid-quarter exam(s), 40% final exam

**Exam format:** transcription and short answer questions

### CDIS 5305 LANGUAGE ACQUISITION

(Sec 1) 4 cr

Instructor: WINDSOR J

Dist Req: none

This course deals with typical native language acquisition and development throughout the lifespan. The focus will be on semantics (meaning), morphology and syntax (grammar) and pragmatics (use) of language. So as to provide a broad theoretical and practical understanding of the nature of language acquisition, the influence of gender, class, race, and culture on language development will be discussed in the context of a variety of dialects,

languages, and registers.

**Class time:** 50% lecture, 25% discussion, 25% small group activities

**Workload:** 20 pages of reading per week, 2 exams, class presentation is required, graded as satisfactory/not satisfactory.

**Grade:** 50% mid-quarter exam(s), 50% final exam

**Exam format:** multiple choice and short answer

### CDIS 5507 CLEFT PALATE, ORAL-FACIAL ANOMALIES AND SPEECH

(Sec 1) prereq 5304, 5504, or #, 4 cr

Instructor(s): STARR C, MOLLER K

Dist Req: none

This course is designed for students majoring in Communication Disorders and may be taken by others interested in careers that serve persons with handicaps. Cleft palate is a congenital defect that may affect speech, language and hearing development. Treatment is provided by speech-language pathologists, audiologists, psychologists, surgeons, dentists and geneticists. This course deals with the concerns of persons with cleft palate and those that serve them. Lectures focus on speech, language and hearing problems and their interdisciplinary treatment. Students observe clinic activities.

**Class time:** 80% lecture, 10% discussion, 10% clinical observations

**Workload:** 40 pages of reading per week, 2 exams, 1 paper, clinic observations

**Grade:** 5% final exam, 45% written reports/papers, 20% special projects

**Exam format:** multiple choice and essay

### CDIS 5900 TOPICS IN COMMUNICATION DISORDERS: CLINICAL ISSUES AND PROCEDURES

(Sec 7) prereq sr or grad stu, 2 cr

Instructor: HINDERSCHEIT L

Dist Req: none

This course is designed to give students who are interested in becoming speech-language pathologists, audiologists, or professionals in related fields, an overview of current procedures in clinical practice. Students will learn about due process procedures of public schools, third party reimbursement basics, how to write measurable objectives and measure progress. Current issues such as registration and licensure; changes in service delivery options; and interpersonal communication with other professionals, supervisors and families, will also be discussed.

**Class time:** 65% lecture, 10% discussion, 25% small group projects in class

**Workload:** 20 pages of reading per week, 2 exams, 3 small projects completed outside of class

**Grade:** 20% mid-quarter exam(s), 20% final exam, 5% class participation, 55% problem solving

**Exam format:** short essay (approximately 6)

### CLIT 5147 TEACHING AS DIALOGUE

(Sec 1) 4 cr

Instructor: SARLES H

Dist Req: none

This course is just what its title says: a dialogue upon teaching. The class will read and engage in dialogue, reflectively considering or

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critiquing its own dialogue. Topics include a defense of the idea of the teacher; a critical look at the asymmetry between teacher and students; some sample dialogues; questions of judgment and grading; how to teach conceptually toward student becoming self-teachers. We will read Paulo Freire's "Pedagogy of the Oppressed" as well as Prof. Sarles' newly published book, "Teaching as Dialogue."

**Class time:** 100% discussion

**Workload:** 40 pages of reading per week, 1 paper or project

**Grade:** 100% written reports/papers

**Exam format:**

## COMPOSITION

### COMP 1011 WRITING PRACTICE I

(Sec 1-82) prereq assignment to category 2 or 3, 5 cr

Instructor: STAFF

Dist Req: none

This course is a writing workshop designed to help students explore the writing process and discover how they can communicate clearly and effectively. Students explore the ways writing helps them to clarify and express ideas, to learn, to discover and to explore, and to communicate clearly. The course emphasizes the writing process--the selection, organization, and articulation of thought--as well as critical reading and thinking skills. Emphasis is also placed on analyzing intended audiences and purposes of various writing situations. Students will work to develop individual and collaborative writing strategies applicable to a wide range of writing situations, including but not limited to writing in the university. Class time is spent largely in a variety of discussion sessions and various in-class writing activities designed to explore the thinking and writing process. Writing assignments may include summaries, critiques, research projects, essays, cultural critiques, writing notebooks, or journals. Note: This course is taught by many different instructors throughout the year, the specific nature of each section will vary somewhat depending on the instructor.

**Class time:** 20% lecture, 40% discussion, 40% writing workshop

**Workload:** 20 pages of reading per week, 10-15 pages of polished writing, writing notebooks

**Grade:** 70% written reports/papers, 30% writing process

**Exam format:**

### COMP 1011H WRITING PRACTICE I

(Sec 80-88) prereq assignment to category 2 or 3, honors student, 5 cr

Instructor: STAFF

Dist Req: none

This course is a more rigorous version of Comp 1011 designed for students in the Honors Program. Typically, students are expected to do more reading and writing and grading standards are raised appropriately. Course enrollment is limited to 16.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

### COMP 1027 INTERMEDIATE EXPOSITORY WRITING

(Sec 1-6) prereq fulfillment of Writing Practice req, 4 cr

Instructor: STAFF

Dist Req: none

This course exposes students to the range of options they have available to them as writers, and encourages a realization that successful or effective writing which takes these options into account. It teaches students to ask and answer the question: Given the audience and the context of this writing situation, what am I really being asked to do, and what choices can I make in terms of tone, style, organization, and content to make this as effective as possible? In accomplishing this goal, students read, analyze, and produce a variety of different rhetorical styles. The course focuses primarily on the writing that students will face for the remainder of their academic career--essay exams, research papers, literature reviews, and reports of various sorts. Many sections include an introduction to general research and library techniques.

**Class time:** 30% lecture, 50% discussion, 20% writing workshop

**Workload:** 30 pages of reading per week, 25+ pages of polished writing

**Grade:** 80% written reports/papers, 20% class participation

**Exam format:**

### COMP 3011 WRITING ABOUT LITERATURE

(Sec 1-5) prereq fulfillment of Writing Practice req, jr, 4 cr

Instructor: STAFF

Dist Req: none

The main focus of this course is on presenting the active reading of literary works (poems, plays, fiction), in literary commentary and criticism, primarily for academic audiences. Through additional use of secondary sources and exploration of different theoretical and critical approaches to literature, students take their place in a three-way dialogue among their own ideas, established criticism, and a literary text itself. Assignments include frequent (brief) written, journal-type responses to texts, explications of poems, analyses of short or long fiction, and/or a research project. For majors in Classics, English, French & Italian, German, Spanish & Portuguese, Humanities, Journalism, Speech, Theatre Arts, and other literature programs and area studies. The preceding description is necessarily general; each instructor determines the specific content and requirements for the course.

**Class time:** 30% lecture, 50% discussion, 20% writing workshop

**Workload:** 30 pages of reading per week, 25+ pages of polished writing

**Grade:** 80% written reports/papers, 20% class participation

**Exam format:**

### COMP 3012 WRITING IN THE HUMANITIES

(Sec 1-5) prereq fulfillment of Writing Practice req, jr, 4 cr

Instructor: STAFF

Dist Req: none

This course is designed to help students link disciplinary interests and knowledge of new writing situations in the humanities. Students will become more conscious of the cultural, social and professional assumptions of their audiences, of the writers they read, and of themselves as writers. The course aims to make the process of writing in the humanities interesting and purposeful while increasing students' proficiency as writers in their disci-

plines. Students may practice summarizing and paraphrasing complex texts; drafting and extensively revising their work; and commenting on the work of fellow class members. Many instructors require a research paper. The course is usually taken by students in Anthropology, Art History, Geography, History, Humanities, International Relations, Philosophy, Political Science, and Area Studies. The preceding description is necessarily general; each instructor determines the specific content and requirements for the course.

**Class time:** 30% lecture, 50% discussion, 20% writing workshop  
**Workload:** 30 pages of reading per week, 25+ pages of polished writing

**Grade:** 80% written reports/papers, 20% class participation

**Exam format:**

### COMP 3013 WRITING FOR THE ARTS

(Sec 1-5) prereq fulfillment of Writing Practice req, jr, 4 cr

Instructor: STAFF

Dist Req: none

The first goal of this course is for students to recognize the degree to which the visual and performing arts depend on the printed word for their existence in our society. Reviews, criticism, and grant applications all play important roles, and are included in the assignments. The second major goal is for students to recognize the interaction among their three roles--artist, audience member, and critic--and to find voices in each which balance subjective response and academic analysis. As artists, the students will practice describing their own work accurately and to explain what it "means" to them and what they hope it "says" to an audience. As audience members, students will practice describing the work of others from the view of their own artistic practice and of the general public. As critics, they will practice expressing their judgment about works of art, and recognizing the emotional, ethical, and political dimensions of such judgments.

**Class time:** 30% lecture, 50% discussion, 20% writing workshop

**Workload:** 30 pages of reading per week, 25+ pages of polished writing

**Grade:** 80% written reports/papers, 20% class participation

**Exam format:**

### COMP 3014 WRITING IN THE SOCIAL SCIENCES

(Sec 1-16) prereq fulfillment of Writing Practice req, jr, 4 cr

Instructor: STAFF

Dist Req: none

Recognizing the role of social sciences writing as a way to communicate knowledge about individual and collective human behavior, attention is paid to different research styles and methods in the disciplines. Assignments involve multidisciplinary perspectives on common social issues, descriptions of behavior, and analyses of quantitative data. They may include literature reviews, research proposals and projects, case studies, and theoretical arguments. For majors in Communications Disorders, Psychology, Sociology, Economics, Political Science, and International Relations. The preceding description is necessarily general; each instructor determines the specific content and requirements for the course.

**Class time:** 30% lecture, 50% discussion, 20% writing workshop

**Workload:** 30 pages of reading per week, 25+ pages of polished writing

**Grade:** 80% written reports/papers, 20% class participation

**Exam format:**

### COMP 3015 WRITING ABOUT SCIENCE

(Sec 1-5) prereq fulfillment of writing practice req, jr, 4 cr

Instructor: STAFF

Dist Req: none

This course is designed to familiarize students with the close connection between writing and the practice of science. The course emphasizes an awareness of science as a form of communication in which professionals create and mediate knowledge through written discourse. By practicing critical reading skills, students learn how different rhetorical strategies are effective in different contexts. Reading materials range from those written for a technical audience to those written for the general public. Writing assignments may include description papers, scientific papers, book or article reviews, grant proposals, and literature reviews. Coursework typically requires extensive drafting and revising and per critiques. The course is designed mainly for CLA and IT majors in Communication Disorders, Statistics, Chemistry, Mathematics, Physics, Computer Science, and Biological Sciences. The preceding description is necessarily general; each instructor determines the specific content and requirements for the course.

**Class time:** 30% lecture, 50% discussion, 20% writing workshop

**Workload:** 30 pages of reading per week, 25+ pages of polished writing

**Grade:** 80% written reports/papers, 20% class participation

**Exam format:**

### COMP 3022 CRITICAL READING AND WRITING FOR MANAGEMENT

(Sec 1-7) prereq 1011 or equiv, Mgmt or Pre-Mgmt stu with more than 60 credits, 4 cr

Instructor: STAFF

Dist Req: none

The major goal of this course is to help students develop critical reading and thinking skills, and to strengthen their writing on business-related issues by incorporating these skills. Students accomplish this goal by working intensively with reading from a variety of business and non-business sources which address current issues, and by writing essays which draw on this information. "Critical reading" includes traditional criteria for evaluating proofs and arguments--logic, persuasiveness, and power--as well as a broader view of reading which includes understanding the writer's position and the role of the audience in shaping the text, and recognizing that ambiguity and uncertainty are often appropriate and welcome ways to characterize the world and its peoples. Frequent writing tasks include summaries, abstracts, critical analyses, audience analyses, and comparison-and-contrast papers. More formal assignments incorporate narrative, descriptive, analytical, and persuasive techniques into expository writing on business-related or public-policy topics.

**Class time:** 30% lecture, 50% discussion, 20% writing workshop

**Workload:** 30 pages of reading per week, 25+ pages of polished writing

**Grade:** 80% written reports/papers, 20% class participation, includes oral presentations

**Exam format:**

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**COMP 3027 ADVANCED EXPOSITORY WRITING**

(Sec 1-9) prereq fulfillment of Writing Practice req, jr, 4 cr

Instructor: STAFF

Dist Req: none

The most general of the upper-division courses, Comp. 3027 is not designed for any specific major, but rather for students who wish to improve their overall ability to write in many settings. Coursework typically involves becoming a more efficient and effective writer by streamlining organization, developing a thesis, drafting, revising, editing, and improving style. Students learn to make more adventurous and appropriate linguistic and rhetorical choices. Many instructors emphasize the analysis of purpose, context, and audience. Critical reading may play a central role. Some typical assignments include literary autobiographies, critical comparisons, article or book reviews, editorials, cultural analyses, research papers, annotated bibliographies, and response papers. The preceding description is necessarily general; each instructor determines the specific content and requirements for the course.

**Class time:** 30% lecture, 50% discussion, 20% writing workshop**Workload:** 30 pages of reading per week, 25+ pages of polished writing**Grade:** 80% written reports/papers, 20% class participation**Exam format:****COMP 3031 TECHNICAL WRITING FOR ENGINEERS**

(Sec 1-5) prereq fulfillment of Writing Practice req, jr, IT stu, 4 cr

Instructor: STAFF

Dist Req: none

This course is designed to familiarize engineering students with the various types of communication necessary to professional engineers. Essential to the successful transfer of technical information is the identification of writing situations, including audiences, the purposes of the communication, and the development of an appropriate voice and style for both formal and informal writing. Recognizing that engineers work in groups more often than they work alone, this course emphasizes collaborative writing. Group projects such as proposals and progress or completion reports will enable students to work through the problems inherent in such collaborative endeavors. Students will also get some practice in oral communication; they will plan and deliver both formal and informal oral presentations during the course. Students will also gain experience in the physical preparation of an engineering document, paying attention to the use of headings and graphic aids. Some of the assignments for this course include: mechanism description, process description, instruction manual, job packet, trip report, context memos, article review, interviews, collaborative proposals, and collaborative progress reports. These are general guidelines.

**Class time:** 20% lecture, 60% discussion, 20% writing workshop**Workload:** 20 pages of reading per week, 25+ pages of polished writing**Grade:** 70% written reports/papers, 10% in-class presentations, 20% class participation**Exam format:****COMP 3032 PREPROFESSIONAL WRITING FOR BUSINESS**

(Sec 1-6) prereq fulfillment of Writing Practice req, School of Mgmt or BIS stu, jr, 4 cr

Instructor: STAFF

Dist Req: none

This course is designed to prepare students for the writing tasks they will face as managers and professional business people. The primary goal of this course are for students to recognize the dependence of business on effective written communication, and to learn to adapt that communication to a wide variety of situations. Students are introduced to these situations through case studies and company assignments which demand complex and accurate context analysis, audience identification, recognition of the document's function within the organization, and selecting the appropriate authorial voice. Memos, progress reports, completion reports, internal proposals, and the like provide opportunities to practice intro-company communications, while formal reports and letters of various sorts let students write for audiences outside the company. Most sections include group projects and one or two formal speaking assignments.

**Class time:** 30% lecture, 50% discussion, 20% writing workshop  
**Workload:** 30 pages of reading per week, 25+ pages of polished writing**Grade:** 80% written reports/papers, 20% class participation, includes oral presentations**Exam format:****COMP 3033 WRITING FOR THE HEALTH SCIENCES**

(Sec 1-5) prereq fulfillment of Writing Practice req, more than 60 credits, 4 cr

Instructor: STAFF

Dist Req: none

The primary goal of this course is to help students in the various fields that constitute the health sciences to identify, comprehend, and gain practice in those writing styles that are appropriate to their disciplines. Through individual and group work, students develop skills in writing descriptions and observations, persuasive essays, research for reports, business plans, and documented papers. Students also respond to different contemporary biomedical, ethical, and environmental questions through informed opinion and clear reporting of research findings. For majors in Nursing, Occupational Therapy, Pre-Veterinary Medicine, Dental Hygiene, and Mortuary Science. The preceding description is necessarily general; each instructor determines the specific content and requirements for the course.

**Class time:** 30% lecture, 50% discussion, 20% writing workshop  
**Workload:** 20 pages of reading per week, 25+ pages of polished writing**Grade:** 80% written reports/papers, 20% class participation**Exam format:****COMP 3085 CONFERENCE COURSE IN ADVANCED COMPOSITION**

(Sec 1) prereq fulfillment of Writing Practice req, jr, written permission of major advisor, Δ, 4 cr

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**Instructor:** STAFF

**Dist Req:** none

This course is designed for a select group of students working on an extended writing project (e.g., senior thesis) or an extensive series of papers written in addition to papers required in other courses. Students can expect to draft, revise, and polish their writing during this course, which involves intensive reader-response at every meeting. Writing exercises and other assignments augment the work on the project. Past projects have included literature reviews, annotated bibliographies, procedure manuals, mechanism descriptions, conference papers, and journal articles. Typical workload is a minimum of ten pages of writing per week, a weekly conference with the instructor, and extensive independent work outside the course. Students must apply in advance for the course. Enrollment is limited; not everyone who applies can be accepted. Chances of acceptance are better if the student is mostly finished with the research phase and is ready to write; presents a well-written, detailed proposal; and demonstrates familiarity with relevant sources. The course requires written permission from the Composition Program (an override). If the course is to fulfill the CLA upper-division reqt, you must get permission from your major adviser.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

## COMPUTER SCIENCE

### CSCI 5107 COMPUTER GRAPHICS I

(Sec 1) prereq 3322, 3327 or #, 4 cr

**Instructor:** BARRY P

**Dist Req:** none

CSCI 5107 is intended to be a general introduction to computer graphics. As such, it will not cover advanced topics (these are covered in CSCI 5117), nor will it focus on any particular graphics system or applications. Rather the course will cover a mixture of introductory topics, and will contain both programming and non-programming aspects. Topics to be covered include: 1) general graphics issues; 2) user interface issues; 3) 2D graphics; 4) introduction to 3D graphics (including the 3D pipeline, shading and hidden surface removal, and ray tracing). Necessary background should include programming experience in (preferably) C or Pascal and familiarity with fundamental mathematics, particularly basic vector algebra. Those who should take this course are people with the appropriate background who are interested both in gaining experience in graphics programming and in learning the theory of computer graphics.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

### CSCI 5301 NUMERICAL COMPUTATION

(Sec 1) prereq Math 3261 or #...knowledge of Pascal or FORTRAN is assumed, 4 cr

**Instructor:** FOX D

**Dist Req:** none

This course will present an introduction to principal topics of numerical computation. The emphasis will be on practical computation and on understanding the sources and the nature of errors and problems in numerical computations. See the following topic list and text sections. Text: Kahaner, Moler & Nash "Numerical Methods & Software", Prentice Hall, 1989.

**Class time:** 100% lecture

**Workload:** 2 exams, 5 programs and computational assignments (about 15-20 hours each)

**Grade:** 30% mid-quarter exam(s), 40% final exam, 30% problem solving

**Exam format:**

## DANCE

### DNCE 1001 FUNDAMENTALS OF MODERN DANCE I

(Sec 1-2) 1 cr

**Instructor:** STAFF

**Dist Req:** none

This is a basic introduction to modern dance. We will explore locomotor movements, such as walk, run, slide, skip, hop, and jump. The student will be introduced to dancetechnique and improvisation based on time, space and force. The student will develop a greater awareness of his/her body's capabilities and will explore the kinesthetic sense.

**Class time:** 100% laboratory

**Workload:** 1 paper

**Grade:** 10% written reports/papers, 45% class participation, 45% attendance

**Exam format:**

### DNCE 1031 BALLROOM DANCE I

(Sec 1-2) 1 cr

**Instructor:** SEALY Z

**Dist Req:** none

Elementary steps of the foxtrot, waltz, tango, samba, cha-cha, rumba, and swing. Objectives: 1) To demonstrate proficient form in basic ballroom dance skills by: utilizing a variety of step patterns, leadings and/or following a partner smoothly, using accepted characteristic style for each dance; 2) To apply an understanding of the basic rhythmic fundamentals in ballroom dance such as meter, accent, tempo and phrasing.

**Class time:** 100% laboratory

**Workload:** no outside reading or written work required

**Grade:** 50% final exam, 50% class participation

**Exam format:**

### DNCE 1034 INTERNATIONAL FOLK DANCE I

(Sec 1) 1 cr

**Instructor:** LOEB B

**Dist Req:** none

This is an introductory course to International Folk Dance. The students will learn folk dances from many different cultures and countries in the world. They will learn basic folk locomotor movements such as schottische, polka, skip, waltz and grapevine,

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as well as a variety of dance forms, such as circle dance, couple dance and line dance. In addition, the student will learn styling nuances from the various cultures which make the dances different from each other.

**Class time:** 100% participation

**Workload:** final project/paper

**Grade:** 100% 40% attendance; 10% written review; 10% progress/effort/attitude; 40% final evaluation

**Exam format:**

### **DNCE 1070 BEGINNING JAZZ I**

(Sec 1) prereq 1003 or 1006, audition, #, 1 cr

Instructor: SEALY Z

Dist Req: none

The basic skills of jazz dance and its origins. Objectives: 1) To explore the traditions of jazz dance and its unique American heritage; 2) To learn the basics of jazz dance and its stylistic range from the inherent influence of native African dance to the more contemporary styles of today.

**Class time:** 100% laboratory

**Workload:** no outside reading or written work required

**Grade:** 50% final exam, 50% class participation

**Exam format:**

### **DNCE 1110 TOPICS IN DANCE THEORY**

(Sec 1) prereq 1003 or 1006, 1 cr

Instructor: LOEB B

Dist Req: none

An experiential survey of major body therapy theories and techniques as they relate to dynamic alignment and dance. Class sessions will include individual movement repatterning (alignment/placement) and an introduction to selected contemporary body therapy theories.

**Class time:** 20% lecture, 80% participatory/experiential lab

**Workload:** final project/journal

**Grade:** 100% 50% achievement/skill; 20% progress/effort/attitude; 30% attendance

**Exam format:**

### **DNCE 3070 INTERMEDIATE JAZZ I**

(Sec 1) max 3 cr; prereq 1090, #, 1 cr

Instructor: SEALY Z

Dist Req: none

Intermediate jazz dance technique and exposure to the eclectic range of jazz dance from its African roots to the fusion of styles today. Objectives: 1) To explore the traditions of jazz dance and its unique American heritage; 2) To learn the basics of jazz dance and its stylistic range from the inherent influence of native African dance to the more contemporary styles of today.

**Class time:** 100% laboratory

**Workload:** no outside reading or written work required

**Grade:** 50% final exam, 50% class participation

**Exam format:**

### **DNCE 3486 ETHNIC DANCE TRADITION IN AMERICAN SOCIETY**

(Sec 1) 4 cr

Instructor: MADDUX M

Dist Req: none

A survey of traditional dances as preserved and transformed by Native Americans, African-Americans, Latinos, Asian Americans and European Americans. Emphasis will be placed on the interpretation of the roles of the dance in these cultures. We will discuss the role of dance in each of these cultures as they have developed historically from the country of origin to America or in the case of the Native American how the dance has evolved historically and culturally through European intervention. We will study the acculturation process within these cultures and the effect that the dance of these cultures has had on "American" dance.

**Class time:** 30% lecture, 20% discussion, 10% laboratory, 40% film/video

**Workload:** 20 pages of reading per week, 2 exams, 1 paper, 5 essays

**Grade:**

**Exam format:** essay

### **DNCE 3700 DANCE REPERTORY THEATRE AND RECONSTRUCTION**

(Sec 1) prereq concurrent enrollment in a technique class, audition, #, 3 cr

Instructor: CHENG M

Dist Req: none

Construction of a dance work; focus is on choreography, music, design, and technical production and performance of the finished work. 1) Student must attend every rehearsal session (unless specifically excused by the choreographer). 2) Student is responsible for remembering/perfecting daily material and being open/responsive to changes, revisions and criticisms. 3) Student must commit to the Spring performance, end of quarter showings and all rehearsals (tech, dress, etc.) necessary to final performance. 4) Student must assume a professional demeanor during creative periods, which includes attentiveness, energy, willingness to help other dancers, and being properly warmed up before each rehearsal.

**Class time:** 100% lecture

**Workload:** 2 hours/day rehearsal Monday thru Friday

**Grade:** 20% class participation, 70% 30% effort/attitude/progress; 40% achievement/performance/skill

**Exam format:**

### **DNCE 5070 ADVANCED JAZZ I**

(Sec 1) max 3 cr; prereq 3090 or equiv, #, 1 cr

Instructor: SEALY Z

Dist Req: none

The development of a clean individual jazz dance style, an understanding of the eclectic range of jazz dance and its various jazz styles. Focus on personalizing and perfecting the execution of material and developing the well rounded performer.

**Class time:** 100% laboratory

**Workload:** no outside reading or written work required

**Grade:** 50% final exam, 50% class participation

**Exam format:**

### **DNCE 5312 DANCE COMPOSITION IV**

(Sec 1) prereq 3313 or equiv, #, 3 cr

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Instructor: CHENG M

Dist Req: none

This is the fourth of a six part sequence on dance composition. Classwork consists of analysis and exploration of structure, tone and vocabulary of dances presented live by class participants as well as works on video tape by national choreographers.

**Class time:** 57% lecture, 10% discussion, 33% laboratory

**Workload:** 1 paper, comp studies

**Grade:** 10% written reports/papers, 30% lab work, 30% class participation, 30% studies; lab involves improv, analysis, discussion, experimentation; attendance important

**Exam format:**

### **DNCE 5700 WORKSHOP: DANCE PERFORMANCE**

(Sec 1) prereq concurrent registration in a technique class, Δ, 3 cr

Instructor: RICHARD B

Dist Req: none

Students must commit to rehearsing from 3-5 p.m. Mondays-Fridays, for the entire 9-month academic year, and to extra rehearsals needed for our Spring concert at Rarig, and weekend tours as scheduled. Student must attend every rehearsal session (unless specifically excused by the choreographer). Student is responsible for remembering/perfecting daily material and to being open and responsive to changes, revisions and criticisms. Student must commit to the spring performance, end of quarter showings and all rehearsals (tech, dress, etc.) necessary to final performance. Student must assume a professional demeanor during creative periods which includes attentiveness, energy, willingness to help other dancers and concern for his/her instrument which includes being properly warmed up before each rehearsal.

**Class time:** 90% lecture, 10% discussion

**Workload:** Concentration and attention through long periods of rehearsal and professional attitude.

**Grade:** grades are based on attendance and quality of rehearsal and performance work

**Exam format:**

## DUTCH

### **DTCH 1101 BEGINNING DUTCH**

(Sec 1) §1110, 5 cr

Instructor: VAN DER SANDEN

Dist Req: none

5 credits, emphasis on proficiency according to ACTFL scale, all four skills (listening, reading, writing, speaking) are taught, although initial emphasis on receptive, passive modalities. Communicative tasks are stressed.

**Class time:** 33% lecture, 33% discussion, 33% group work

**Workload:** 8 pages of reading per week, 5 exams, short essays

**Grade:** 25% final exam, 33% written reports/papers, 66% quizzes, there is a final only if quizzes and other work are not good enough for an A.

**Exam format:** grammar sentences, reading comprehension, aural comprehension.

### **DTCH 1104 INTERMEDIATE DUTCH**

(Sec 1) prereq 1103 or #, 5 cr

Instructor: VAN DER SANDEN

Dist Req: none

5 credit, prerequisite Dutch 1103 or proven proficiency in Dutch to participate meaningfully at 1104 level. All four skills (listening, reading speaking, writing) at the intermediate levels of the ACTFL scale. Teaching emphasis on communicative tasks.

**Class time:** 33% lecture, 33% discussion, 33% group work

**Workload:** 15 pages of reading per week, 5 exams, ten one page diaries and essays

**Grade:** 25% final exam, 33% written reports/papers, 66% quizzes, final only if work throughout quarter is not good enough for an A.

**Exam format:** grammar sentences, reading comprehension/writing.

### **DTCH 3011 CONVERSATION AND COMPOSITION**

(Sec 1) prereq 1106 or #, 4 cr

Instructor: VAN DER SANDEN

Dist Req: none

Spoken and written Dutch at the intermediate high and advanced level. Grammar review: book by Donaldson, "Dutch Reference Grammar", 4 credits. Prerequisite: Dutch 1106 or proven proficiency in Dutch at the required levels.

**Class time:** 20% lecture, 40% discussion, 40% group work

**Workload:** 8 papers, number of pages of reading varies each week

**Grade:** 50% written reports/papers, 50% oral proficiency

**Exam format:**

### **DTCH 3012 CONVERSATION AND COMPOSITION**

(Sec 1) prereq 3011, 4 cr

Instructor: VAN DER SANDEN

Dist Req: none

Spoken and written Dutch at the intermediate high and advanced level. Grammar review: book by Donaldson, Dutch Reference Grammar. 4 credits. Prerequisite: Dutch 1106 or proven proficiency in Dutch at the required levels.

**Class time:** 20% lecture, 40% discussion, 40% group work

**Workload:** 8 papers, number of pages of reading varies each week

**Grade:** 50% written reports/papers, 50% oral proficiency

**Exam format:**

### **DTCH 3310 STUDIES IN DUTCH AUTHORS: COLONIALISM, DECADENCE, AND THE LOSS OF THE SELF**

(Sec 1) prereq 1103 or 15 cr of 1110 or #, 4 cr

Instructor: PARENTE J

Dist Req: none

The topic for the winter quarter is "Colonialism, Decadence and the Loss of the Self: Dutch Literature 1860-1920." This course serves to introduce students to six major Dutch writers. We will begin with Maltatuli's novel "Max Havelaar" (1860), the masterpiece of 19th century Dutch literature, and one of the earliest works to problematize the lot of the European colonialist in a non-European culture. Colonialism is further discussed in the novel "The Hidden Force" (1900) by Louis Couperus, a work that chronicles the psychological disintegration of a Dutch civil servant in Java. Novels by Fredrik Van Eeden, Marcellus Emats, and

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J. van Oudshoorn follow, which present psychiatric case studies of protagonists burdened with mental illness and sexual inadequacy. Lastly, we will read the masterpiece of Dutch naturalist theater, Herman Heijermans's "The Good Hope" (in repertory during the winter at the Guthrie Theater), an indictment of the injustices committed against seamen by the Dutch shipping industry. All readings in English.

**Class time:** 30% lecture, 70% discussion

**Workload:** 150 pages of reading per week, 2 papers

**Grade:** 60% written reports/papers, 40% class participation

**Exam format:**

### **DTCH 3610 DUTCH AUTHORS IN TRANSLATION: COLONIALISM, DECADENCE, AND THE LOSS OF THE SELF**

(Sec 1) no knowledge of Dutch req, 4 cr

Instructor: PARENTE J

Dist Req: (CSOM: D)

The topic for the winter quarter is "Colonialism, Decadence and the Loss of the Self: Dutch Literature 1860-1920." This course serves to introduce students to six major Dutch writers. We will begin with Maltatuli's novel "Max Havelaar" (1860), the masterpiece of 19th century Dutch literature, and one of the earliest works to problematize the lot of the European colonialist in a non-European culture. Colonialism is further discussed in the novel "The Hidden Force" (1900) by Louis Couperus, a work that chronicles the psychological disintegration of a Dutch civil servant in Java. Novels by Fredrik Van Eeden, Marcellus Emats, and J. van Oudshoorn follow, which present psychiatric case studies of protagonists burdened with mental illness and sexual inadequacy. Lastly, we will read the masterpiece of Dutch naturalist theater, Herman Heijermans's "The Good Hope" (in repertory during the winter at the Guthrie Theater), an indictment of the injustices committed against seamen by the Dutch shipping industry. All readings in English.

**Class time:** 30% lecture, 70% discussion

**Workload:** 150 pages of reading per week, 2 papers

**Grade:** 60% written reports/papers, 40% class participation

**Exam format:**

## **EAST ASIAN STUDIES**

### **EAS 1463 INTRODUCTION TO EAST ASIA IN MODERN TIMES**

(Sec 1-6) §Hist 1463, 3463, 4 cr

Instructor(s): FARMER E !!Morse Alumni Teaching Award Winner!!, MARSHALL B

Dist Req: (CLA: C) (IT: C) (CSOM: C)

This course surveys the modern history of China, Japan, Korea and Vietnam. It looks at the collapse of the traditional order in the 19th Century, colonialism, the modernization of Japan, World War II, communism in China and the war in Vietnam.

**Class time:** 60% lecture, 30% discussion, 10% slides

**Workload:** 80 pages of reading per week, 3 exams, 1 paper, 1 map exercise

**Grade:** 40% mid-quarter exam(s), 30% final exam, 30% written reports/papers

**Exam format:** 20% identification, 80% essay

### **EAS 3465 CHINA'S RESPONSE TO THE WEST, 1750-1911**

(Sec 1) §Hist 3465, 4 cr

Instructor: WALTNER A

Dist Req: (CSOM: C)

This course will examine the social, intellectual and political history of China from 1750 to 1911. In chronicling the decline of the last Chinese dynasty, we will look at the internal logic of Chinese history as well as examining the impact of western ideas and institutions on Chinese society. Western imperialism, eighteenth century population growth, internal rebellion and reform movements are all topics we will address. We will look at a variety of ways of conceptualizing social change. The class format will be a mixture of lecture and discussion. Students will be asked to do several short writing assignments using primary documents as their sources. I encourage students to use their imaginations in these assignments. Much of the assigned reading will be primary sources, including fiction. We will read portions of the eighteenth century novel "The Story of the Stone"; Philip Kuhn's "Soulstealers", which discusses a sorcery episode; Pamela Crossley's "Orphan Warriors", which deals with the question of Manchu ethnicity, as well as other texts which deal with ordinary life in nineteenth century China.

**Class time:** 80% lecture, 20% discussion

**Workload:** 100 pages of reading per week, 2 exams, 2 papers

**Grade:** 30% mid-quarter exam(s), 40% final exam, 30% written reports/papers

**Exam format:** identification of terms and essay

### **EAS 3468 PEOPLE'S REPUBLIC OF CHINA: THE COMMUNIST REVOLUTION, 1900 TO PRESENT**

(Sec 1) §Hist 3468, Hist 5468, 4 cr

Instructor: FARMER E !!Morse Alumni Teaching Award Winner!!

Dist Req: (CSOM: C)

The main purpose of this course is to provide the student with an overview of the communist phase of the Chinese revolution, including some fundamentals of Marxism-Leninism, events in the revolution, the development of the Chinese Communist Party, the thought of Mao Zedong, the Chinese social system, and aspects of current development policies. Secondary goals include reading and discussion of Chinese literature and descriptions of Chinese life, a consideration of the nature of a revolutionary society, the study of a non-Western culture, and the opportunity to write a paper.

**Class time:** 80% lecture, 10% discussion, 10% slides

**Workload:** 80 pages of reading per week, 2 exams, 1 paper, 1 map exercise

**Grade:** 20% mid-quarter exam(s), 30% final exam, 50% written reports/papers

**Exam format:** 20% identification; 80% essay

### **EAS 3474 RISE OF MODERN JAPAN, 1853-1914**

(Sec 1) §Hist 3474, 4 cr

Instructor: MARSHALL B

Dist Req: none

To introduce the student to the historical experience of Japan during the Meiji "revolution"-a transition from the "traditional" society of the Tokugawa shogunate (1600-1867) to the "modern"

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culture of the Meiji period (1868-1912). The first third of the course will explore the internal social, cultural and political changes as well as foreign intrusion which destroyed the old regime. It will then be possible to examine the native sources as well as the Western influences that produced Japan's constitutional monarchy, parliamentary institutions, industrial economy, modern social structure and overseas conquests. Finally the course will explore the legacy of the Meiji period for 20th century Japan, discussing the signs of social and cultural stress stemming from these "successes." No prereqs. The course is designed with three types of undergrads in mind. It is a self-contained introduction for the general liberal arts undergrad as well as those intending to go on in, e.g., the School of Management or Journalism. It will also continue to fulfill one of the major requirements for History majors. Finally, majors in East Asian Studies and the new Asian track of the Int'l Relations can continue to use it to complete their requirements.

**Class time:** 90% lecture, 10% discussion

**Workload:** 100 pages of reading per week, 2 exams, 1 paper

**Grade:** 30% mid-quarter exam(s), 50% final exam, 20% written reports/papers

**Exam format:** essay

### EAS 3481 MODERN JAPANESE SOCIETY

(Sec 1) §Soc 3481; prereq introductory sociology or #, 4 cr

Instructor: BROADBENT J

Dist Req: (CLA: C) (IT: C) (CSOM: C)

This course introduces the student to the whole gamut of institutions of Japanese society that frame the world view of its people and provide the background for its activities. At the same time, as we go through, I discuss each institution in comparison to how they work in the US, or sometimes other societies, such as the Chinese and Korean roots of some aspects of Japanese society. This clarifies for the student the distinctive qualities of both the US and Japan, as well as other societies. It also provides an integrated understanding of how another society works as a holistic system, which is more valuable than bits and pieces of knowledge which can be seen as exotica. By inculcating an understanding of the integrity of another culture, this approach enhances the student's overall ability to enter into and negotiate foreign cultures. I start with an historical overview, then go into the basic religious and value system orientations, such as personality formation, morality, and norms of relating. Then I proceed through the family and socialization, education, work, business organization, politics, social stratification, and social problems like discrimination, the status of women, and crime.

**Class time:** 70% lecture, 30% discussion

**Workload:** 100 pages of reading per week, 1 exam, 1 paper, 4 short biweekly "reaction papers" to readings (2-3 pp)

**Grade:** 30% final exam, 40% written reports/papers, 10% class participation, 20% reaction papers

**Exam format:** essay

## ECOLOGY EVOLUTION BEHAVIOR

### EEB 3111 INTRODUCTION TO ANIMAL BEHAVIOR

(Sec 1-2) §AnSc 3111; prereq Biol 1008 or 1009 or #, 4 cr

Instructor: PHILLIPS R

Dist Req: none

This course is a survey of the biological study of behavior, including questions of causation, development, function and evolution; it emphasizes the evolution of behavior, especially that of social behavior, of animals in their natural environments. Topics include the genetic basis for behavioral evolution; mechanisms of development; mechanisms for detecting and reacting to events in the environment; ways of studying evolutionary history of behavior; behavior as an adaptive mechanism; and detailed analysis of the effects of environment on reproduction, sexual and parental behavior, and on social behavior. Finally human behavior is examined in light of results of studies of other species. Texts: Alcock, John "Animal Behavior. An Evolutionary Approach" 5th edition; Dawkins, R. "The Selfish Gene" 2nd edition.

**Class time:** 60% lecture, 25% discussion, 15% videos and films

**Workload:** 55 pages of reading per week, 2 exams, 2 papers

**Grade:** 25% mid-quarter exam(s), 35% final exam, 40% written reports/papers

**Exam format:** essay

### EEB 5122 PLANT/ANIMAL INTERACTIONS

(Sec 1) prereq Biol 1106 or Biol 3011, Biol 1103 or Biol 3012, 10 cr in biological sciences, or #, 4 cr

Instructor: MORROW P

Dist Req: none

Text: Howe & Westley 'Ecological Relationships of Plants and Animals'. This is a course in evolution and ecology that examines interactions at biochemical, organismal, population and community levels. We explore mutualistic interactions (pollination and seed dispersal and protection) and antagonistic interactions (herbivory). About 3/4 of the examples are drawn from literature on plants and insects and about 1/4 from vertebrate literature. In discussion sections students read original literature and co-lead a session.

**Class time:** 66% lecture, 33% discussion

**Workload:** 25 pages of reading per week, 2 exams, 1 paper, 1 poster presentation; students exchange early drafts of term papers to get/give comment

**Grade:** 30% mid-quarter exam(s), 30% final exam, 25% written reports/papers, 15% discussion section and poster presentation

**Exam format:** short essays, some multiple choice

### EEB 5129 MAMMALOLOGY

(Sec 1-2) §FW 5129; prereq Biol 1106 or Biol 3011 or #, 5 cr

Instructor: BIRNEY E

Dist Req: none

After completing this course, each student should be able to: 1) discuss general mammalian biology and have sufficient background to become a specialist in any single aspect of mammalogy after additional study; 2) discuss the evolutionary and biogeographic history of the Mammalia, at least in broad-brush terms; 3) recognize and identify all mammals at the ordinal level, North American mammals at the familial level, mammals north of Mexico at the generic level, and Minnesota mammals at the specific level; 4) discuss mammalian distribution at the levels in #3 above. Text: Vaughan, T. A. 1986. "Mammalogy" 3rd edition.

**Class time:** 50% lecture, 45% laboratory, 5% field trip

**Workload:** 3 exams, 1 paper

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**Grade:** 14% mid-quarter exam(s), 22% final exam, 14% written reports/papers, 14% quizzes, 43% lab work, 7% field trip; choose mid-quarter or quizzes for grade

**Exam format:** short answer, definitions, essay

### EEB 5601 LIMNOLOGY

(Sec 1) §Geo 5601; prereq Chem 1005 or #, 4 cr

Instructor: SHAPIRO J

Dist Req: none

Limnology is the science of lakes. The course begins with lake formation, then describes the physical attributes of water bodies, such as stratification as a result of solar radiation, water movements, etc. After a brief introduction to lake biology the chemical attributes are described, following which considerable time is spent once more on the organisms living in lakes, and their interrelations with the physical and chemical conditions. Finally, a series of case studies of lake restoration illustrate how all of the information taught is necessary to successful lake management and restoration. The aim of the course is to present lakes as ecosystems and to illustrate the need to understand how all aspects interact.

**Class time:** 85% lecture, 15% discussion

**Workload:** 30 pages of reading per week, 2 exams, 8-10 scientific papers are to be read and are included in the exams

**Grade:** 30% mid-quarter exam(s), 70% final exam

**Exam format:** short answer questions that require the students to integrate various aspects of what they have been taught

## ECONOMICS

### ECON 1101 PRINCIPLES OF MICROECONOMICS

(Sec 10-18) §1104; prereq plane geometry and interm algebra at GC 0623 and GC 0631 level, 4 cr

Instructor: SOTKIEWICZ P

Dist Req: (CLA: C) (IT: C) (CSOM: C)

The course is designed to give students an introduction to the principles of microeconomics through the use of intuition, basic mathematics, and graphical analysis. The focus of the course will be on supply and demand, consumer theory, theory of the firm and different market structures. Algebra is required.

**Class time:** 75% lecture, 25% discussion

**Workload:** 40 pages of reading per week, 2 exams

**Grade:** 25% mid-quarter exam(s), 50% final exam, 25% problem solving

**Exam format:** mid-term exam is short answer essay and problem solving; final exam is like the midterm plus there is some multiple choice

### ECON 5821 ELEMENTS OF PUBLIC FINANCE

(Sec 1) §3801; prereq 3101, 3103 or equiv, 4 cr

Instructor: FOSTER E

Dist Req: none

Tax and expenditure policies, primarily at federal level. Impact of tax structure on the distribution of income. Evaluation of public programs. Optimal mix of public and private sector output. This course is intended to focus on what you will remember 10 years from now, not on what you might memorize for a test and forget the next day. That means, in general, to concentrate on general

principles, not on technical details. However, the course will deal with some technical concepts that are useful for thinking both about government in the economy and about other issues in economics. The course is designed: 1) to help you to understand competing views of the proper role of government in the economy; 2) to help you understand the effects of tax and spending programs on the economy, taking into account the way private agents will respond to government actions and the way members of the government may use their powers; 3) as with any "application" course, to deepen your understanding of the relevant aspects of economic theory.

**Class time:** 70% lecture, 10% discussion, 20% small group work  
**Workload:** 25 pages of reading per week, 2 exams, 1 paper, 12 homework and group exercises

**Grade:** 18% mid-quarter exam(s), 36% final exam, 18% written reports/papers, 14% problem solving, 14% group exercises

**Exam format:** essay, problem solving, short answers

### ECON 5831 COST-BENEFIT ANALYSIS

(Sec 1) prereq 3101, 3103 or equiv, 4 cr

Instructor: FOSTER E

Dist Req: none

Principles for evaluation of benefits and costs of public projects or programs. Definition and measurement of benefits and costs. Rate of return and rate of discount. Treatment of market imperfections, risk and uncertainty. This course is intended to focus on what you will remember 10 years from now, not on what you might memorize for a test and forget the next day. That means, in general, to concentrate on general principles, not on technical details. However, the course will deal with some technical concepts that are useful for thinking both about the value of government projects and about other issues in economics. The course is designed: 1) to prepare you to be an intelligent consumer of cost-benefit analysis (hereafter, CBA), able to read professional analysis critically, with a sense of which assumptions are important to the results, and where to look for the key issues in the analysis; 2) to provide a sufficient guide to the conventions and the literature of CBA so that, if you become a professional economist, your general economics training together with this course and independent reading will enable you to conduct CBA yourself; 3) to deepen your understanding of the relevant aspects of economic theory.

**Class time:** 70% lecture, 15% discussion, 15% group exercises

**Workload:** 50 pages of reading per week, 2 exams, 1 paper, 5 homework exercises

**Grade:** 20% mid-quarter exam(s), 40% final exam, 20% written reports/papers, 10% problem solving, 10% group exercises

**Exam format:** essay, problem solving, short answers

## ENGLISH

### ENGL 1241 INTRODUCTION TO SHAKESPEARE

(Sec 1) 4 cr

Instructor: CLAYTON T !!Morse Alumni Teaching Award Winner; also CLA Distinguished Teacher Award!!

Dist Req: (CLA: D) (IT: D) (CSOM: D)

Shakespeare had the good fortune to be born an imaginative genius at a time when a multicultural modern English was aborning and

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enabling the creation of a literature and drama of extraordinary richness, social comprehensiveness, and perceptual power. His gift for creating dramatic actions that are extravagant, familiar, profound, and funny by turns, was complemented by a verbal ability to express those actions in variegated and probing language that initially seems a little remote but readily comes into focus and technicolor for most willing to make the effort--of which the notorious "thou-thee/you" requires no more than does a distinction current today in French(tu/vous) and German(du/Sie), for example. Not tailored especially for coasters and drifters, this heads-on course aims to introduce serious and lively students to 8-10 representative plays, with some attention to contemporary contexts and antecedents, continuing social relevance, and some recent productions; and to provide them with the resources to understand Shakespeare on their own and make him a welcome, stimulating, and instructive part of their permanent mental apparatus.

**Class time:** 80% lecture, 20% discussion

**Workload:** 2 exams, 2 papers, 8-10 plays plus 1-2 supplementary books; quiz every class; additional papers optional

**Grade:** 20% mid-quarter exam(s), 45% final exam, 20% written reports/papers, 15% quizzes, better-than-student's-average optional papers factored in 10-40% according to number/length

**Exam format:** some objective questions but substantially essay, typically including synthesis, comparison and analysis of passages

### ENGL 3115 THE MIDDLE AGES

(Sec 1-2) 4 cr

Instructor: MACLEISH A

Dist Req: (CLA: D) (IT: D) (CSOM: D)

Major and representative works of the Middle Ages (700-1400). The readings are mostly in translation: "Beowulf", Old English shorter poems, Middle English lyrics, "Sir Gawain and the Green Knight" (a romance), and six of Chaucer's "Canterbury Tales" in Middle English.

**Class time:** 50% lecture, 50% discussion

**Workload:** 2 exams, 2 papers, moderate reading until we come to Chaucer

**Grade:** 25% mid-quarter exam(s), 50% final exam, 25% written reports/papers

**Exam format:** essay

### ENGL 3119 THE VICTORIAN AGE

(Sec 1) 4 cr

Instructor: HANCHER C

Dist Req: (CLA: D) (IT: D) (CSOM: D)

We will read major and representative works of the Victorian period (1832-1901). Typical authors: Tennyson, Browning, Hopkins, Arnold, Dickens, the Brontes. We will also read lesser-known works of the period, such as anonymous city ballads and magazine articles; gauge the increasing social impact of literacy; and consider the literary importance of illustration and painting.

**Class time:** 50% lecture, 50% discussion

**Workload:** 80 pages of reading per week, 2 exams, 5 papers

**Grade:** 25% mid-quarter exam(s), 35% final exam, 30% written reports/papers, 10% quizzes

**Exam format:** multiple choice and essay

### ENGL 3241 SHAKESPEARE

(Sec 1-2) §3243, 4 cr

Instructor: CLAYTON T !!Morse Alumni Teaching Award Winner; also CLA Distinguished Teacher Award!!

Dist Req: (CLA: D) (IT: D) (CSOM: D)

Reading Shakespeare's plays affords the best available reasons for their place in a sane curriculum and in the serious (and entertaining) studies of anyone seeking a comprehensive liberal education. They are indispensable in any program of literary studies broad enough to be concerned with major works written anywhere before 1965. And, as an imaginatively conceived and finely measured fictionalizing of a wide range of individual and collective human behavior, they can also be an effective inoculation against many of the individual and social idiocies that abound everywhere, even in universities. Intensive study of 6-7 plays written before c. 1602 "A Midsummer Night's Dream", "Hamlet", "Henry IV--Part 1", and 2-3 others--with the primary objective of helping students to read the plays with understanding and appreciation, to see their relevance to "postmodern" human circumstances as well as their relations to their author and their own times, and to recognize that some of what they have to say needs to be articulated in performance. The course takes explicit account of the social history, religious and political thought, and other arts of Shakespeare's age, but stresses the expressive resources of the works themselves.

**Class time:** 30% lecture, 70% discussion

**Workload:** 2 exams, 2 papers, 5-6 plays read in some depth; 2-3 supplementary books; quizzes every class

**Grade:** 20% mid-quarter exam(s), 45% final exam, 20% written reports/papers, 15% quizzes, optional papers factored in 10-40% according to number and length; worse not counted

**Exam format:** mostly essay, typically including synthesis, comparison, and analysis of passages; but also "objectionable" questions

### ENGL 3242 SHAKESPEARE

(Sec 3-4) §3243, 4 cr

Instructor: REED P !!CLA Distinguished Teacher Award!!

Dist Req: (CLA: D) (IT: D) (CSOM: D)

This course concentrates on plays written in the latter half of Shakespeare's career. The six to be studied are Anthony and Cleopatra, The Tempest, Measure for Measure, Macbeth, King Lear, and Othello. Usually 4 classes will be devoted to each play, moving from background lecture to class and group discussions. Emphasis will be on careful reading of the text, with some discussion of critical commentary on them. The course is intended to increase the reader's understanding and enjoyment of the plays through attention to such fundamentals as characterization, theme, dramatization, poetic form, historical content and contemporary relevance.

**Class time:** 35% lecture, 30% discussion, 35% question and answer

**Workload:** 2 exams, 2 papers

**Grade:** 25% mid-quarter exam(s), 35% final exam, 35% written reports/papers, 5% class participation

**Exam format:** essay; choice of questions. Midquarter on preceding work; final mainly on work since midquarter.

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**ENGL 3960 JUNIOR-SENIOR SEMINAR**

(Sec 2) prereq Engl maj jr or sr, Comp 3011 or Comp 3012 or Comp 3013, Δ, 4 cr

Instructor: ROSS D

Dist Req: none

This seminar will juxtapose Nathaniel Hawthorne's four famous novels - "Scarlet Letter", "House of the Seven Gables", "Blithedale Romance", and "Marble Faun" - with those of his contemporaries, the Brontes, Charlotte's "Jane Eyre" and "Villette", Anne's "Tenant of Wildfell Hall", and Emily's "Wuthering Heights". These four novelists treat common themes, place characters in similar circumstances, experiment with narrative techniques, and draw on ideas and values from their societies in interesting ways. We will try to discover the combination of cultural and personal forces which may help account for these similarities and differences.

**Class time:** 100% discussion

**Workload:** 150 pages of reading per week

**Grade:** 100% written reports/papers

**Exam format:**

**ENGL 5414 CONTEMPORARY AMERICAN LITERATURE**

(Sec 1) 4 cr

Instructor: SOLOTAROFF R

Dist Req: none

We will use Volume II of the 'Norton Anthology of American Literature' as the basic text and from it read such fiction writers as Cheever, Mailer, Saul Bellow, Nabokov, Flannery O'Connor, Updike, Roth, Mason, Walker and Erdrich and such poets as Roethke, Lowell, Rich, and Plath. We'll also read one or two novels. Some possibilities: Doctorow 'The Book of Daniel'; Stone, 'Dog Soldiers'; Percy, 'The Moviegoer'; Oates, 'them'. I will teach this course by a combination of lecture and discussion.

**Class time:**

**Workload:**

**Grade:** 25% mid-quarter exam(s), 35% final exam, 40% written reports/papers

**Exam format:** in-class midquarter and final

**ENGL 5471 AMERICAN DRAMA**

(Sec 1) prereq grad stu or Engl maj or Δ, 4 cr

Instructor: GEFFEN A !!CLA Distinguished Teacher Award!!

Dist Req: (CSOM: D)

Because of the unavailability of a comprehensive anthology of American drama from 1787 to the present, the course focuses on a wide range of American plays from 1918 to 1985. Students are urged not only to read the plays as texts, but also to imagine the ways in which they could be presented on the stage.

**Class time:** 20% lecture, 80% discussion

**Workload:** 100 pages of reading per week, 1 exam, 1 paper

**Grade:** 50% final exam, 50% written reports/papers

**Exam format:** essay: many choices, open-book, questions given in advance

**ENGL 5852 MODERN IRISH LANGUAGE**

(Sec 1) 5 cr

Instructor: STENSON N

Dist Req: none

This course will focus on developing functional skills in the Irish

language, through formal study of vocabulary and grammar and through practice activities in language use. Focus will be most strongly on speaking and listening skills, though some reading and writing will be included (primarily as homework). Elements of Gaelic Irish culture will be introduced as appropriate. Pace of course is fairly rapid; a good deal of outside preparation is expected in the form of grammar and vocabulary study and daily written exercises, reinforced in class with drills and more communication-oriented exercises.

**Class time:** 10% lecture, 90% class drills, small group and pair work

**Workload:** 6 pages of reading per week, 5 exams, daily written practice with structured exercises, weekly free writing, vocabulary/grammar

**Grade:** 25% final exam, 25% quizzes, 25% class participation, 25% problem solving

**Exam format:** fill-in, sentence construction and manipulation, translation

**ENGLISH WRITING****ENGW 1101 INTRODUCTION TO CREATIVE WRITING**

(Sec 1-5) 4 cr

Instructor: STAFF

Dist Req: (CLA: D) (IT: D) (CSOM: D)

Introduction to writing fiction, poetry, and memoir. The class will focus on students' individual writing, through in-class writing exercises, take-home assignments, and small group workshopping of students' work. There is also a series of weekly lectures by local writers in which they discuss the creative process. Attendance at two literary events during the quarter is required as an introduction to the local literary community. Contemporary fiction, memoir, and poetry texts are used as models in class. There are no exams, rather, two creative writing portfolios are required, one at mid-term and one for the final.

**Class time:** 30% lecture, 60% discussion, 10% in-class writing exercises

**Workload:** 20 pages of reading per week, 2 writing portfolios

**Grade:** 30% written reports/papers, 30% special projects, 20% class participation, 20% assignments, notebook, responses (weekly written requirements)

**Exam format:** no exam - writing project instead

**ENGW 1102 INTRODUCTION TO FICTION WRITING**

(Sec 1) §Engl 1101; prereq writing practice or 1101, 4 cr

Instructor: STAFF

Dist Req: (CSOM: D)

Beginning instruction in the writing of fiction, taught in a workshop format: students discuss each other's works of fiction. Texts are drawn from collections of contemporary fiction and essays on technique. Topics covered include characterization, plot, dialogue, and style. Written comments on fellow students' work are required as well as revised individual work.

**Class time:** 10% lecture, 90% discussion

**Workload:** 20 pages of reading per week, final portfolio of writing and critical comments

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**Grade:** 60% special projects, 10% in-class presentations, 30% class participation, presentation of a contemporary writer or story to class

**Exam format:**

### ENGW 1103 INTRODUCTION TO POETRY WRITING

(Sec 1) §Engl 1104; prereq writing practice or 1101, 4 cr

Instructor: STAFF

Dist Req: (CSOM: D)

Beginning instruction in poetry writing, conducted in a workshop format: a group discussion of each student's work. Texts are drawn from contemporary collections and books on technique. In and out-of-class writing assignments are designed to generate new material and direction. Attendance of poetry readings is required. Each student may prepare a presentation on a living and publishing poet. No exams; rather, a final portfolio of poetry and critical comments due at end of course.

**Class time:** 10% lecture, 90% discussion

**Workload:** 20 pages of reading per week, 1 paper, 1 possible presentation on current poet; paper of final portfolio of poetry and comments

**Grade:** 40% written reports/papers, 10% in-class presentations, 20% class participation, 30% weekly assignments and requirements

**Exam format:** no exam, final writing portfolio instead

### ENGW 3960 WRITING WORKSHOP FOR MAJORS

(Sec 1) prereq Comp 3xxx, Engl maj, jr or sr, Δ, 4 cr

Instructor: STAFF

Dist Req: none

This writing workshop for English majors with a strong interest in creative writing is designed to allow students to complete their senior project for the major. The fall workshop typically focuses on fiction, and EngW 3102 (intermediate fiction writing) is a prerequisite for the workshop. Students will complete at least one polished piece of work to be submitted as their senior project, though additional work will also be required. Students taking this course to fulfill their seminar and senior paper requirements should also register for Engl 3961. Students must apply for this course in advance through the English undergraduate studies office, 209 Lind Hall.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

### ENGW 5101 ADVANCED FICTION WRITING

(Sec 1) prereq Δ, 4 cr

Instructor: FITZGERALD M

Dist Req: (CSOM: D)

A workshop for those who have considerable experience in writing short stories. A maximum of 15 students will be selected on the basis of a ten to fifteen page sample of fiction. The format of the class will include critiques of each student's stories as well as stories by published authors, chosen by the students. The instructor's expectations of the quality of the writing will be high, and the expectations of improvement even higher.

**Class time:** 100% discussion

**Workload:** 2+ stories for critique, revised versions done by end of qtr, critiquing published work

**Grade:** 70% written reports/papers, 30% class participation, only exceptional achievements gain an A or A- grade

**Exam format:**

### ENGW 5105 ADVANCED POETRY WRITING

(Sec 1) prereq Δ, 4 cr

Instructor: BROWNE!!**CLA Distinguished Teacher Award!!**

Dist Req: none

Advanced Workshop for students with considerable experience in writing poetry. The workshop gives students an opportunity to explore new poetic possibilities and to read widely in contemporary poetry and poetics. Prerequisite is consent of instructor (based on writing sample). The maximum number of students in the class is 15. The staple of the class is the poetry worksheet, which consists of student poems for discussion. Each member of the class writes critiques of the poems and refers to them during discussion. The instructor usually joins in at the end of the discussion and summarizes opinions about the poem. Each class session begins with writing time, and students are invited to read what they have written (often in response to a specific assignment). There is usually time, at the end of class, for an open reading of favorite poems, and sometimes students, or the instructor, will present informal reports on some aspect of poetry which has become a topic of interest during discussion. The atmosphere of the class is informal but the instructor has high expectations of the group members in terms of their contribution to the success of the course.

**Class time:** 15% lecture, 85% discussion

**Workload:** Students turn in portfolio of work (15pp est.) at end of course along w/copies of critique

**Grade:** 15% written reports/papers, 75% class participation, 10% overall progress in writing and oral participation

**Exam format:**

### ENGW 5310 READING AS WRITERS

(Sec 1) prereq #, 4 cr

Instructor: STAFF

Dist Req: none

Wide reading of contemporary playwrights. Attendance at some local performances will be required. Written responses and exercises assigned. For additional information, contact the creative writing office, 224 Lind Hall, 625-6366.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

## ENTOMIOLOGY

### ENT 1005 ECONOMIC ENTOMOLOGY

(Sec 1-4) prereq Biol 1011 or #, 4 cr

Instructor: RAGSDALE D

Dist Req: none

This course builds upon the student's previous exposure to biological systems, evolution, and ecology obtained in the General Biology prerequisite. It focuses on pest species in the Class Insecta

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- the most diverse and abundant group of animals on earth. Lectures are organized into three major themes, an overview of the Class Insecta, introduction to pest management theory, and finally in-depth discussion of management of specific pest species. Pest management systems are presented within the overall context of preserving environmental quality while sustaining a profitable agricultural production system. Throughout the quarter there are several (10-12) edited and graded 1-page writing assignments that emphasizes critical thinking skills. The overall goal is to introduce students to insect pest complexes and to provide students with biological principles that will empower them to make informed decisions concerning pest control strategies from the viewpoint of the producer as well as the consumer.

**Class time:** 50% lecture, 20% discussion, 20% laboratory, 10% field trips - local

**Workload:** 30 pages of reading per week, 6 exams, 1 insect collection

**Grade:** 40% mid-quarter exam(s), 20% final exam, 10% written reports/papers, 5% quizzes, 25% lab work

**Exam format:** 40% - 1 to 2 word answers (fill-in-the-blank); 40%-short answer/calculations; 20%-essay (1-3 paragraphs)

## FINANCE

### BFIN 3000 FINANCE FUNDAMENTALS

(Sec 1-2) §MBA 8040; prereq Acct 1050 or Acct 1025, 4 cr  
Instructor: ROSKOP !!Morse Alumni Teaching Award Winner!!  
Dist Req: none

The goal of a firm is to manage its financial, material and human resources in order to produce the maximum benefits to its investors, employees, customers, and to society. The more specific financial goal of the firm is to maximize the value of the owners' investments. This course will examine the various financial principles, policies and information that relate to the above financial goal. Emphasis will be given to managing profit margins, asset turnovers and risk so as to maximize the returns to owners. Text: "Business Financial Management" by P.L. Cooley and P.F. Roden, Dryden Press, 1988; Study guide available in bookstore, but not required. Optional: "The Wall Street Journal", "Business Week", "Fortune", "Money", and "Barron's" are all available at student subscription rates.

**Class time:** 80% lecture, 20% discussion

**Workload:** 50 pages of reading per week, 2 exams, 4 papers

**Grade:** 25% mid-quarter exam(s), 50% final exam, 25% written reports/papers, class participation will affect grade

**Exam format:** problems

### BFIN 3300 INVESTMENT MANAGEMENT AND FINANCIAL MARKETS

(Sec 1) §8300; prereq 3000, 4 cr  
Instructor: JAGANNATHAN R

Dist Req: none

This course will introduce you to a variety of securities, i.e., stocks, bonds, mortgage backed securities, options and futures contracts that are available to investors in financial markets. You will learn how to value these securities and why these securities may be of interest to an individual or institutional investor. Text:

"Investments" by W. F. Sharpe and G. J. Alexander, 4th edition.

**Class time:** 100% lecture

**Workload:** 4 hours work per class

**Grade:** 50% final exam, 20% special projects, 30% quizzes

**Exam format:** problems

## FINNISH

### FIN 1101 BEGINNING FINNISH

(Sec 1) 5 cr

Instructor: STAFF

Dist Req: none

This is the first quarter in a sequence of six courses of Finnish provided the U of M. This sequence serves to satisfy the proficiency oriented foreign language requirement of CLA. Our goals for this quarter is to learn some high frequency phrases, build vocabulary and learn to actively use Finnish language in everyday situations. We put emphasis on "survival skills", everyday language in listening, speaking, reading and writing. Attendance expected.

**Class time:**

**Workload:** journal; bi-weekly quizzes; listening practices

**Grade:**

**Exam format:**

### FIN 1104 INTERMEDIATE FINNISH

(Sec 1) prereq 1103 or equiv, 5 cr

Instructor: STAFF

Dist Req: none

This class is a continuation of the beginning sequence of Finnish 1101-1103. It will continue the fundamentals of spoken and written Finnish on a more advanced level. A heavy emphasis is given to spoken Finnish, but all four aspects of language learning are stressed: listening, speaking, reading, and writing. Its main objective is to make the student proficient in Finnish. Text: "Finnish for Foreigners 2" Maija-Hellikki Aaltio, plus "Exercises 2" Aaltio.

**Class time:**

**Workload:** CLA guidelines call for 1 hour per class, 1-2 hours homework

**Grade:** 33% final exam, 33% quizzes, 33% class participation

**Exam format:** comprehensive final

## FOOD SCIENCE AND NUTRITION

### FSCN 1102 TECHNOLOGY OF FOOD PROCESSING

(Sec 1) prereq high school chemistry, biology, 4 cr

Instructor: LABUZA T !!Morse Alumni Teaching Award Winner!!

Dist Req: none

This course introduces the science or non-science student to the basis for why foods are processed. The course begins with a general overview of the technologies used including a video on the "Making of a Junk Food" and one on how foods are marketed at the grocery store. The students then learn about the biochemical, chemical, physical and microbiological modes that cause foods to

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deteriorate. This is followed up by a series of lectures on state and federal regulations on food safety, nutrition and labeling. The last third of the course then focuses on the ethical, moral, legal, and intentional aspects that impact on the technologies used to process foods. The student prepares 4 short papers on food advertising and then 3 medium papers on the design of several types of food stores and how new foods are positioned. There are three in-class quizzes and each lecture 3 students make an oral presentation on a new food product advertisement.

**Class time:** 60% lecture, 35% discussion, 5% video

**Workload:** 20 pages of reading per week, 3 exams, 7 papers, short papers

**Grade:** 30% written reports/papers, 60% quizzes, 10% in-class presentations

**Exam format:** short essays and definitions

### FSCN 1612 PRINCIPLES OF NUTRITION

(Sec 1-10) prereq high school chemistry and biology, 4 cr

Instructor: KURZER M

Dist Req: (CLA: B) (IT: B) (CSOM: B)

Fundamental concepts; human nutritional requirements, function of nutrients, nature of deficiencies, vegetarianism, weight loss, fad diets, activity, obesity, cancer, heart disease, food processing, safety, world food problems. Text: Wardlaw & Insel "Perspectives in Nutrition", 1990. Performance objectives: As an outcome of didactic instruction, a computer project and assigned reading, the student will 1) identify the essential nutrients in the human diet; 2) understand changes in nutrient needs that occur during life cycle; 3) describe the major function(s) of each nutrient in the body and changes that occur with deficiency of excess; 4) identify common and concentrated food sources of each nutrient; 5) describe the physical and chemical changes that occur during digestion and absorption of nutrients; 6) distinguish among available dietary standards and their uses; 7) design a sound program of eating and defend this program in terms of nutrition concepts; 8) critically analyze popular writings and advertising concerning nutritional aspects of food.

**Class time:** 75% lecture, 25% discussion

**Workload:** 60 pages of reading per week, 3 exams, 1 computer-assisted diet/activity analysis project, min. of 12 hr/wk additional time

**Grade:** 40% mid-quarter exam(s), 40% final exam, 20% special projects

**Exam format:** multiple choice

### FSCN 3102 INTRODUCTION TO FOOD SCIENCE

(Sec 1-3) prereq Chem 1002 or Chem 1052, 4 cr

Instructor: WARTHESEN J !!College of Agriculture Distinguished Teacher!!

Dist Req: none

This course is an introduction to the composition and the chemical and physical properties of foods; interaction, reaction, and evaluation of foods due to formulation, processing and preparation. Student performance objectives: identify changes in food resulting from food preparation and processing procedures and explain these changes based on knowledge of reactions and interactions of the chemical constituents of the food product. Explain the function of major food ingredients in food systems. Evaluate the quality of food products using subjective quality standard charac-

teristics and objective methods of analysis. Produce and understand differences in food quality resulting from variations in preparation and/or ingredients. Text: Food Science by H. Charley. Contact hours per week: 3 one hour classes and 2 two hour labs/week.

**Class time:** 25% lecture, 15% discussion, 60% laboratory

**Workload:** 30 pages of reading per week, 3 exams, 1 paper

**Grade:** 40% mid-quarter exam(s), 30% final exam, 5% written reports/papers, 10% quizzes, 10% lab work, 5% problem solving

**Exam format:** essay and short answer

### FSCN 3472 FOOD SELECTION PRINCIPLES

(Sec 1) prereq 4 cr in food sci, 4 cr

Instructor: ASP E

Dist Req: none

Consumer trends in lifestyles, demographics, and food consumption and their influence on foods available in the food marketplace and on food selection are discussed. Roles of each segment of the food distribution system are examined in terms of their economic impact, functions, effect on the availability of food to consumers, and effect on retail food prices. Characteristics of foods available and principles of food selection within the major food categories are discussed and used by students in their assignments to explain variations found in food availability, quality, nutrient content, and prices. Dietary recommendations and food guides are covered in terms of how they can be met by using foods available in retail food stores and in foodservice. Use of a computer-based nutrient calculation system is included in a project.

**Class time:** 70% lecture, 10% closed-circuit TV, 20% recitation/discussion

**Workload:** 3 exams, 1 project, 5-6 assignments, reading varies

**Grade:** 25% mid-quarter exam(s), 30% final exam, 15% special projects, 30% problem solving

**Exam format:** short answer, true/false, short essay, matching

### FSCN 3662 INTRODUCTION TO THE CLINICAL PRACTICE OF DIETETICS

(Sec 1) prereq 12 cr in food science, nutrition, regis in coordinated prog in dietetics, 2 cr

Instructor(s): HANSON M, OLSON M !!Morse Alumni Teaching Award Winner!!

Dist Req: none

Course Description: Introduction to the practice of dietetics in medical centers, extended care facilities, ambulatory care centers, community agencies, and food production facilities. Text and reference materials: Assigned readings from current literature; 'Merck Manual of Diagnosis and Therapy', most recent edition; Merck, Sharp and Dohn, Rahway, NJ; Zeman, F. 'Applications of Clinical Nutrition', Prentice Hall, 1988.

**Class time:** 80% lecture, 20% discussion

**Workload:** 30 pages of reading per week, 2 exams, minimum of 6 hr/wk beyond scheduled class time

**Grade:** 33% mid-quarter exam(s), 67% final exam

**Exam format:** multiple choice, case study/essay

### FSCN 5312 INSTRUMENTAL ANALYSIS OF FOODS

(Sec 1) prereq 3112, 5110, 3 cr

*The distribution requirement (Dist Req) information is only valid for CLA, IT and CSOM and for groups A, B, C and D.*

*Look for UCIP on the University Computer Network via Gopher*

Instructor(s): REINECCIUS G, DAVIS E

Dist Req: none

This course focuses on chromatographic and spectral methods as they are applied to food applications. Nearly half of the course is devoted to spectral methods - visible, UV, near infrared, NMR, etc. Chromatographic methods are limited to liquid/liquid extracts and solid phase extractions as well as gas and liquid chromatography. The laboratory is an extremely important part of the class (50% of grade). Lab books are required and they must be done well and professionally. Lectures are done in a traditional manner, although notes are handed out to the students.

**Class time:** 50% lecture, 50% laboratory

**Workload:** 3 exams, lab reports

**Grade:** 33% mid-quarter exam(s), 17% final exam, 30% written reports/papers, 20% quizzes

**Exam format:** essay and some math type

### FSCN 5360 SENSORY EVALUATION OF FOOD QUALITY

(Sec 1) prereq 3102, Stat 3012 or Stat 5021, 4 cr

Instructor: VICKERS Z

Dist Req: none

Fundamentals of sensory perception. Test designs and methods used in studying sensory quality of foods. Much of the course focuses on basic sensory testing methods, their strengths and weaknesses, and methods for analyzing the data. There are about 6 laboratory sessions during which students participate in sensory tests. Students analyze the data from the entire class using statistical software on microcomputers, and prepare written laboratory reports. During the last part of the quarter students are assigned a problem and work in small groups to plan and conduct a sensory test to provide the needed information. The students prepare both a written and an oral report of their project. There is no text for this course, instead various book chapters, journal articles, etc. are made available.

**Class time:** 20% lecture, 50% discussion, 30% laboratory

**Workload:** 20 pages of reading per week, 2 exams, 7 papers, 1-2 hours of computer data analysis per week

**Grade:** 30% mid-quarter exam(s), 20% written reports/papers, 30% special projects, 10% lab work, 10% problem solving

**Exam format:** essay

### FSCN 5523 TECHNOLOGY OF FERMENTED DAIRY PRODUCTS

(Sec 1) prereq 5110, 5123, 4 cr

Instructor: BASTIAN E

Dist Req: none

Applications of Dairy Chemistry and Physics to Cheesemaking processes will be emphasized. Microbiology in cheese systems also will be covered. Students should be able to describe ways of controlling flavor and physical properties of fermented products, recognize and correct product defects, calculate yields and common dairy problems, and write reports and papers in a scientific manner. Students should understand chemical, physical, and microbial interactions in fermented dairy products; an integrated approach.

**Class time:** 52% lecture, 15% discussion, 33% laboratory

**Workload:** 20 pages of reading per week, 3 exams, 2 papers, one special cheesemaking project

**Grade:** 25% mid-quarter exam(s), 30% final exam, 10% written reports/papers, 5% special projects, 30% lab work

**Exam format:** essay, multiple choice, calculations

### FSCN 5530 INDUSTRIAL PROCESSING OF FRUITS AND VEGETABLES

(Sec 1) prereq 3136, 5110, 5120, 5135, 4 cr

Instructor: BREENE W

Dist Req: none

Course covers industrial scale fruit & vegetable processing including fresh market items as well as controlled atmosphere storage, packaging, canning, freezing, pickling, dehydration, juice, jelly and jam production, chemical preservatives and more recent innovations as microwave energy use, irradiation, supercritical extraction, membrane techniques, etc. The chemistry of plant materials in general is the basis for understanding changes in fruit or vegetable composition during maturation and ripening, post harvest and during the various modes of processing. We cover textural and color quality evaluation and statistical quality control procedures. We have plant tours of fresh produce handling/wholesaling/precut salad operation, potato chip factory, frozen french fried potato plant, pickle and sauce factory and metal can manufacturing plant. Students required to prepare a "product" from fruits/vegetables and describe the process as a "hands-on" class project. Exams are open book take-home problem-solving.

**Class time:** 50% lecture, 10% closed-circuit TV, 10% discussion, 10% laboratory, 20% field trips

**Workload:** 30 pages of reading per week, 2 exams, 6 short quizzes, 3-4 homework exercises, 5 field trip reports, brief project report

**Grade:** 20% mid-quarter exam(s), 30% final exam, 20% written reports/papers, 10% special projects, 20% quizzes

**Exam format:** quizzes are short answer-fill in the blank type; exams are essay type

### FSCN 5620 NUTRITION AND METABOLISM

(Sec 1) prereq 3612 or #, Biol 5001 or BioC 3031, 5 cr

Instructor: BRADY L

Dist Req: none

For FSCN 5620, the emphasis is exactly the same as FSCN 5622, but it is for undergraduates rather than graduates. The major differences in the two courses are in content rather than intent. Both aim to emphasize critical thinking, writing, and problem solving using nutrition as a backdrop. Both require some kind of Biochem and Physiology as prerequisites, although I am willing to make individual case decisions on preparation, especially for CBS students who might have a lot of Chemistry, Biology. FSCN 5620 is more superficial in that we cover carbohydrates, lipids, proteins, vitamins, and minerals. Instead of 5 papers to critically analyze, I provide the students with sets of data and specific questions to answer about the data. I use the text "Advanced Nutrition and Human Metabolism" by Hunt & Groff (West Publishing).

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

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**FSCN 5622 MACRO-NUTRIENT METABOLISM**

(Sec 1) prereq 3612, Biol 5001, or BioC 3031, Phsl 3051, 4 cr  
Instructor: BRADY L

Dist Req: none

Intended for graduate students who have completed Biochem and Physiology. Function and metabolism of carbohydrates, lipids, and proteins in mammals. Critical thinking and problem solving and writing emphasized. Text: Harper's Biochemistry, also selected recent review are used.

Class time: 60% lecture, 40% discussion

Workload: 2 exams, 5 papers to read and analyze; pages reading per week variable

Grade: 50% final exam, 30% problem solving, 20% oral exam

Exam format: open ended take home papers and final - student must organize and write. This year I will add an oral exam.

**FSCN 5643 WORLD FOOD PROBLEMS**

(Sec 1) §AgEc 5790, Agro 5200, Soc 5675, LACS 5280; prereq sr or grad student, 3 cr

Instructor(s): BREENE W, BUSTA F

Dist Req: none

Dr. Willis Peterson is the coordinator of this course. In previous quarters, lectures have been presented by many different individuals, mostly professors representing Agronomy, Agr/Appl Econ, Vet Medicine, Food Sci/Nutrition, Family Soc. Sci., Soils Dept. Two individuals from outside the University lectured, one representing an NGO working in Third World Countries, the other a former prof. in Vet Med/An Sci. We encouraged discussion and input from students. We used slides, overheads and handouts to supplement assigned and suggested readings. Homework assignments (four) were also used. The final class period was in the form of a panel discussion wherein the question "Commercializing Agriculture: Is the United Fruit model the answer to the hunger problem" was debated. The professors played the role of U.S. corporate VP's and the class played the role of the "parliament" of a fictitious third world country. Grades were based about equally on a final exam and the homework.

Class time: 70% lecture, 30% discussion

Workload: Since this is a team teaching effort, please rely on coordinator Dr. Peterson to supply.

Grade: 50% final exam, 50% written reports/papers

Exam format: essay

**FSCN 5664 FIELD EXPERIENCE IN CLINICAL NUTRITION**

(Sec 1-2) prereq course in human nutrition, #, 3 cr

Instructor(s): HANSON M, OLSON M !!Morse Alumni Teaching Award Winner!!

Dist Req: none

Prereq. FScN 5665, 5662 or demonstrated equivalent. Application of nutrition information to solution of problems related to diabetes mellitus, cardiovascular and respiratory disease and obesity; assigned readings, discussion and supervised practice in clinical sites. In addition to listed prerequisite, should be second year student enrolled in the Coordinated program in Dietetics. Texts and reference materials include: assigned readings from current scientific literature; National Research Council, Recommended Dietary Allowances, National Academic Press, 1989; Weinsier, R1, Heimburger, D. and Butterworth, C., Handbook of Clinical

Nutrition, Mosby, St. Louis, 1989; Zeman, F., Clinical Nutrition and Dietetics, Macmillan, Riverside, NJ, 1990.

Class time: 10% discussion, 90% supervised practice in health care facility

Workload: prep of patient care plans, projects, supp reading; min 9 hr/wk beyond supv practice time

Grade: 85% written reports/papers, 15% clinical performance

Exam format:

**FSCN 5665 APPLIED CLINICAL NUTRITION I**

(Sec 1) prereq Biol 5001, Phsl 3051 or 1002, LaMP 5177 or ¶, 3 cr

Instructor: HANSON M

Dist Req: none

Course Description: Nutritional assessment and support; fluid and electrolyte balance; diet drug interactions. Nutritional intervention in disorders of the gastrointestinal system and in cancer. Text and reference materials: Assigned readings from current scientific literature; Zeman, F., 'Clinical Nutrition and Dietetics', Macmillan, 1990.

Class time: 95% lecture, 5% discussion

Workload: 50 pages of reading per week, 2 exams, 1 paper, minimum of 9 hr/wk beyond scheduled class time

Grade: 25% mid-quarter exam(s), 41% final exam, 17% written reports/papers, 17% quizzes

Exam format: multiple choice, case study

**FRENCH****FREN 1101 BEGINNING FRENCH**

(Sec 1-6) Degree credit granted only according to Entrance Standard, 5 cr

Instructor: STAFF

Dist Req: none

First of a group of three courses (Fren 1101, 1102, 1103) designed to develop basic communicative proficiency in French in speaking, listening, reading, and writing, and to familiarize students with the cultures of the French-speaking world. Students work on listening, reading, writing, and grammar primarily outside of class. Some class time is spent on reading, writing, and grammar, but the primary focus of in-class work is on developing speaking and listening skills through whole-group and small-group interactive communicative activities.

Class time:

Workload: 20 pages of reading per week, 4 exams, 4 speaking tests, 10 listening quizzes, 5 short compositions, daily exercises

Grade: 25% mid-quarter exam(s), 25% final exam, 17% written reports/papers, 23% quizzes, 10% other assignments and/or participation

Exam format: varies

**FREN 1102 BEGINNING FRENCH**

(Sec 1-3) Degree credit granted only according to Entrance Standard; prereq 1101 or equiv, 5 cr

Instructor: STAFF

Dist Req: none

For a full description see Fren 1101.

Class time:

*The distribution requirement (Dist Req) information is only valid for CLA, IT and CSOM and for groups A, B, C and D.*

*Look for UCIP on the University Computer Network via Gopher*

**Workload:** 20 pages of reading per week, 4 exams, 4 speaking tests, 10 listening quizzes, 5 short compositions, daily exercises  
**Grade:** 25% mid-quarter exam(s), 25% final exam, 17% written reports/papers, 23% quizzes, 10% other assignments and/or participation  
**Exam format:** varies

### FREN 1103 BEGINNING FRENCH

(Sec 1-4) prereq 1102 or Entrance Standard proficiency test, 5 cr

Instructor: STAFF

Dist Req: none

For a full description see Fren 1101.

**Class time:**

**Workload:** 20 pages of reading per week, 4 exams, 4 speaking tests, 10 listening quizzes, 5 short compositions, daily exercises  
**Grade:** 25% mid-quarter exam(s), 25% final exam, 17% written reports/papers, 23% quizzes, 10% other assignments and/or participation

**Exam format:** varies

### FREN 1104 INTERMEDIATE FRENCH

(Sec 1-9) prereq 1103 or three yrs high school Fren, 5 cr

Instructor: STAFF

Dist Req: none

First of a group of three courses (Fren 1104, 1105, 1106) designed to further develop communicative proficiency in French in speaking, listening, reading, and writing, and to familiarize students with the cultures of the French-speaking world. Basic grammar is reviewed and expanded upon. Readings include a variety of types of texts, from magazine articles to literary works representing many francophone cultures. Class time focuses on group discussions of readings, and interactive communicative speaking activities.

**Class time:**

**Workload:** 20 pages of reading per week, 3 exams, 2 papers, 4 speaking tests, written daily assignments and a journal

**Grade:** 27% mid-quarter exam(s), 22% final exam, 23% written reports/papers, 15% quizzes, 13% daily assignments and/or participation

**Exam format:** varies

### FREN 1105 INTERMEDIATE FRENCH

(Sec 1-3) prereq 1104, 5 cr

Instructor: STAFF

Dist Req: none

For a full description see Fren 1104.

**Class time:**

**Workload:** 20 pages of reading per week, 3 exams, 2 papers, 4 speaking tests, written daily assignments and a journal

**Grade:** 27% mid-quarter exam(s), 22% final exam, 23% written reports/papers, 15% quizzes, 13% daily assignments and/or participation

**Exam format:** varies

### FREN 1106 INTERMEDIATE FRENCH

(Sec 1-4) prereq 1105, 5 cr

Instructor: STAFF

Dist Req: none

For a full description see Fren 1104.

**Class time:**

**Workload:** 20 pages of reading per week, 3 exams, 2 papers, 4 speaking tests, written daily assignments and a journal

**Grade:** 27% mid-quarter exam(s), 22% final exam, 23% written reports/papers, 15% quizzes, 13% daily assignments and/or participation

**Exam format:** varies

### FREN 3014 FRENCH PHONETICS

(Sec 1) prereq 1106, 4 cr

Instructor: WIELAND M

Dist Req: none

Objectives: 1) practical - perfecting pronunciation in French; 2) theoretical - comparing French and American pronunciation, learning spelling, sound correspondence, phonetic transcription. The course is conducted exclusively in French. Pre-req. is 1106 French.

**Class time:** 20% discussion, 80% doing pronunciation exercises

**Workload:** 15 pages of reading per week, 9 exams, oral (taped) assignments and 2 oral exams

**Grade:** 10% mid-quarter exam(s), 35% final exam, 35% quizzes, 20% taped oral exercises; final is 20% oral and 15% written

**Exam format:** short answer, some objective

### FREN 3015 FRENCH COMPOSITION AND CONVERSATION

(Sec 1-3) prereq 1106, 4 cr

Instructor: STAFF

Dist Req: none

Sections of 3015 are taught by various department staff, including faculty and advanced graduate students. Course requirements are approximately the same for all sections, with some variations according to the instructor. Both 3015 and 3016 together focus on grammatical accuracy and the articulation and organization of ideas, particularly in writing. The course also seeks to develop skills in reading and textual analysis, as well as to enrich active vocabulary and idiomatic usage. Though some speaking practice is included, please note that 3015 no longer focuses on conversation skills. Current textbooks are "Mise au point" (grammar textbook, in French) and "Alineas" (examples and description of various types of written texts). Students do grammar exercises independently, using instructor-provided answer keys. Regular writing assignments, which usually involve at least one rewriting. Tests include verb conjugations, all tenses.

**Class time:** 100% discussion

**Workload:** 40 pages of reading per week, 6 exams, 5 papers

**Grade:** 20% final exam, 50% written reports/papers, 30% quizzes, 70% class participation, may vary

**Exam format:** short answer, essay

### FREN 3016 ADVANCED FRENCH COMPOSITION AND CONVERSATION

(Sec 1-2) prereq 3015 or #, 4 cr

Instructor: STAFF

Dist Req: none

Sections of 3016 are taught by various Department staff, including

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faculty and advanced graduate students. Course requirements are approximately the same for all sections, though some variation will occur with each instructor, especially with respect to reading assignments. 3016 is the second half of the two-quarter sequence, 3015-3016, which focusses on grammatical accuracy and the articulation and organization of ideas in written expression. The course also seeks to develop skills in reading and textual analysis, as well as to enrich active vocabulary and idiomatic usage. Current textbooks are "Mise au point" (grammar textbook, in French) and "Alineas" (examples and description of various types of written texts). Instructors may assign other additional readings. Students do grammar exercises independently, using instructor-provided answer keys. Regular writing assignments, which usually involve at least one rewriting.

**Class time:** 100% discussion

**Workload:** 30 pages of reading per week, 6 exams, 5 papers, may vary with instructor

**Grade:** 20% final exam, 50% written reports/papers, 25% quizzes, 10% class participation

**Exam format:** short answer, essay

### FREN 3103 FRENCH LITERARY TEXTS: NOVEL

(Sec 1) prereq 3101 or above, 4 cr

Instructor: BREWER M

Dist Req: (CLA: D) (IT: D) (CSOM: D)

This course follows French 3101 and is an introduction to literary analysis through the critical reading of selected works in the novel genre. Works will be treated through textual analyses that bring into focus questions of social, historical, and cultural representation. Class time is devoted to discussion of general and particular issues of analysis and to exchanges based on students' readings and ideas. The course is writing-intensive and focused on the organization and presentation of analysis and argument.

**Class time:** 100% mixture of lecture, discussion, group discussion, short presentations

**Workload:** 60 pages of reading per week

**Grade:** 15% mid-quarter exam(s), 15% final exam, 55% written reports/papers, 15% class participation

**Exam format:** essay

### FREN 3289 TOPICS IN 20TH-CENTURY LITERATURE

(Sec 1) prereq 3101, 3103, 4 cr

Instructor: BREWER M

Dist Req: (IT: D)

Focuses on 20th-century French and Francophone fiction, the course will address questions of subjectivity and alterity in the context of contemporary reflections on discourse and reading. These questions will be related to issues of ethics between individuals as well as between them and the "natural" world. Readings will include fictional works by Colette, André Gide, Marguerite Duras, and Andree Chedid.

**Class time:** 50% lecture, 50% discussion

**Workload:** 150 pages of reading per week, 2 exams, 2 papers

**Grade:** 15% mid-quarter exam(s), 15% final exam, 60% written reports/papers, 10% class participation

**Exam format:** essay

### FREN 3701 THE DEVELOPMENT OF THE FRENCH LANGUAGE

(Sec 1) prereq 3015 or #, 4 cr

Instructor: WIELAND M

Dist Req: (CLA: A) (IT: A) (CSOM: A)

In this course, students will study the linguistic development of the French language from Latin to modern French. Both internal factors affecting development (e.g., simplification within the language) and external factors affecting development (e.g., historical and social phenomena) will be examined in order to give students an idea of how the French language came to be what it is today.

**Class time:** 10% lecture, 90% discussion

**Workload:** 50 pages of reading per week, 3 exams, 5 unannounced quizzes on reading assignments

**Grade:** 40% mid-quarter exam(s), 30% final exam, 10% quizzes, 20% class participation

**Exam format:** multiple choice, essay, and short answer

### FREN 5105 TOPICS IN CRITICISM

(Sec 1) prereq 3209 or above, 4 cr

Instructor: BREWER D

Dist Req: none

This course will examine several of the most influential representatives of French critical thought of the last quarter century. Our sampling will be interdisciplinary in nature, drawing upon figures working in - and crossing the boundaries of - disciplines such as literary theory, psychoanalysis, political theory, philosophy, feminism, and history. While attempting to situate various texts in specific intellectual traditions and historical contexts, we will be concerned to analyze the strengths and limits of particular critical models and paradigms. As a final exam, each student will write a longish essay that presents, comments, and/or applies a particular critical model or paradigm to a selected object (such as a literary text, but possibly also a specific historical event or cultural phenomenon).

**Class time:** 60% lecture, 25% discussion, 15% oral presentation

**Workload:** 50 pages of reading per week, 1 exam, 2 short analytical resumes, weekly reading journal

**Grade:**

**Exam format:** essay

## GENETICS AND CELL BIOLOGY

### GCB 5042 QUANTITATIVE GENETICS

(Sec 1) prereq 5033...Stat 5301 rec, 4 cr

Instructor: ENFIELD F

Dist Req: none

This course would be more appropriate with an 8000 level designator. It is intended for, and primarily taken by, graduate students in the plant and animal sciences and ecology. GCB 5033 (offered spring quarter) is a course more appropriate for advanced undergraduate students in the biological sciences and beginning graduate students.

**Class time:** 80% lecture, 20% discussion

**Workload:** 1 exam, 8 problem sets (considerable emphasis on problem solving)

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**Grade:** 33% problem solving, 67% combined between mid-quarter and final exam - this course is offered S-N only.

**Exam format:** problem solving

### GCB 5114 GENERAL PHYSIOLOGY

(Sec 1) prereq Biol 3011, 5001, Phys 1109 or 1295, 3 cr

Instructor: GOLDSTEIN S

Dist Req: none

The first 3 weeks cover physical principles useful for physiology. The next several lectures cover membranes and transport in general. The next few weeks cover electrophysiology. The last couple weeks cover muscle.

**Class time:** 100% lecture

**Workload:** 15 pages of reading per week, 3 exams

**Grade:** 50% mid-quarter exam(s), 50% final exam

**Exam format:** open book, problem solving

## GEO-ENGINEERING

### GEOE 3700 HOW TO MODEL IT: BUILDING MODELS TO SOLVE ENGINEERING PROBLEMS

(Sec 1) prereq IT Honors or #, 4 cr

Instructor: SMITH K

Dist Req: none

Building Models to Solve Engineering Problems will focus on problem formulation, design and construction of models, and drawing conclusions from modeling results. Students will work in small groups on a number of problems selected from various engineering contexts. Students will learn how to use computer-based modeling tools, including spreadsheets and equation solvers. The entire course will be problem-based; that is, the emphasis will be on formulating and solving problems. Numerous problems will be given to introduce and help students learn engineering and modeling concepts, including: identification of variables and parameters, solution estimation, levels of representation, Occam's razor, modeling resolution, importance of purpose and context, time dependence, bounds, lumped parameters, differences between deterministic and stochastic models, use of diagrams and schematics for formulation, solution, and explanation, identification and incorporation of constraints, role of optimization, model verification and sensitivity analysis, how to compare models, representing and exploring trade-offs, qualitative and quantitative models, algorithm, heuristics, trade-offs, best change, state-of-the-art, rule to thumb, order of magnitude.

**Class time:** 30% lecture, 30% discussion, 40% small group problems solving

**Workload:** 20 pages of reading per week, 1 paper, 5 group projects

**Grade:** 25% written reports/papers, 25% special projects, 50% problem solving

**Exam format:**

## GEOGRAPHY

### GEOG 1401 PHYSICAL GEOGRAPHY

(Sec 1-12) 5 cr

Instructor(s): BROWN D, SKAGGS R

Dist Req: (CLA: B) (IT: B) (CSOM: B)

Course is intended to put human actions in an environmental context. The idea on an environmental literacy course seems to be to put humans and their actions in a context of other things. That context has several components, each of which has several dimensions that are relevant to their understanding. Physical Geography is organized around environmental change. To gain understanding of that, we examine how environmental systems work and interact to produce global and local patterns of various earth resources such as climate, land configurations, soils, and biological resources.

**Class time:** 60% lecture, 40% laboratory

**Workload:** 50 pages of reading per week, 7-8 short quizzes

**Grade:** 70% quizzes, 30% lab work

**Exam format:**

### GEOG 1425 INTRODUCTION TO METEOROLOGY

(Sec 1-3) §Soil 1262, 4 cr

Instructor(s): BAKER D, 2 OTHERS

Dist Req: (CLA: B) (IT: B) (CSOM: B)

This course is a joint offering by Geography Department and Soil Science Department. A pre-calculus introduction to nature of the atmosphere and its behavior including Atmospheric composition, structure, stability, and motion; cloud forming processes and classification; precipitation processes, air masses; fronts, cyclones and anticyclones; general weather patterns; meteorological instruments and observations; plotting and analysis of maps; forecasting. The objective is to know and understand the rudiments of weather observing and forecasting.

**Class time:** 60% lecture, 40% laboratory

**Workload:** 40 pages of reading per week, 2 exams, 1 lab assignment per week

**Grade:** 25% mid-quarter exam(s), 50% final exam, 25% lab work

**Exam format:** multiple choice; true/false; brief explanation (2-3 sentences usually sufficient)

### GEOG 1501 THE LANGUAGE OF MAPS

(Sec 1) §3311, 5 cr

Instructor: GERSMEHL P!!**CLA Distinguished Teacher Award!!**

Dist Req: (CLA: A) (IT: A) (CSOM: A)

Per week: 2 lectures, 1 review/quiz, 2 laboratory. Guest lecturers tell how they use maps in real world - e.g. to plan store locations, fight mosquitoes, redistrict elections, hunt criminals, monitor wetlands, or whatever is lined up for a given quarter. Set of skill quizzes, exercises, and individual projects give students a way to show what they learn.

**Class time:** 33% lecture, 34% discussion, 33% projects

**Workload:** 25 pages of reading per week, 2 exams, 6 exercises

**Grade:** 12% mid-quarter exam(s), 12% final exam, 25% special projects, 25% quizzes, 22% lab work, 2% class participation

**Exam format:** multiple choice, essay and fill in blanks

### GEOG 3101 GEOGRAPHY OF UNITED STATES AND CANADA

(Sec 1) 4 cr

Instructor: HART J

Dist Req: (CLA: C) (IT: C) (CSOM: C)

A visual tour of the continent, with large numbers of slides in each

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lecture. Emphasis on the ways in which different groups of people have interacted with different environments to produce distinctive regions. Satisfies the cultural pluralism requirement.

**Class time:** 100% lecture

**Workload:** 50 pages of reading per week, 2 exams, 1 paper

**Grade:** 50% mid-quarter exam(s), 50% final exam, 5% possible written reports or papers as extra credit

**Exam format:** multiple choice based on maps

### **GEOG 3421 CLIMATOLOGY**

(Sec 1) prereq 1401 or 1425 or Soil 1262 or Phys 1071 or #, 4 cr

**Instructor:** KLINK K

**Dist Req:** none

This class will give an overview of the extraterrestrial, atmospheric, oceanic, and land-surface processes that characterize our climatic environment. Emphasis will be placed on the physical principles underlying the study of climate. The impacts of climate and climatic change on human and environmental systems will be another important theme.

**Class time:** 80% lecture, 20% discussion

**Workload:** 40 pages of reading per week, 2 exams, 3-4 homework exercises

**Grade:** 30% mid-quarter exam(s), 40% final exam, 30% problem solving

**Exam format:** multiple choice, short answer, essay

### **GEOG 3511 INTRODUCTION TO CARTOGRAPHY**

(Sec 1) prereq 5 cr in geog or #, 5 cr

**Instructor:** MCMASTER R

**Dist Req:** none

This course provides students with the background to acquire, geocode, analyze, and display both spatial and attribute data. The focus of this course is on cartographic representation, including methods of classification, symbolization, and generalization. Additionally, general principles of cartographic design (color-theory, figure-ground, and typography) are emphasized. Although the lecture content is oriented towards conceptual material, students are provided with practical experience with map design and symbolization using a series of computer statistical, spreadsheet, graphics, and mapping packages. Geography 1501, The Language of Maps, is recommended, but not required.

**Class time:** 60% lecture, 40% laboratory

**Workload:** 30 pages of reading per week, 2 exams, 1 term project

**Grade:** 20% mid-quarter exam(s), 30% final exam, 20% special projects, 30% lab work

**Exam format:** short answer, problem solving, map design

### **GEOG 5444 GEOGRAPHY OF WATER RESOURCES**

(Sec 1) prereq 2 courses physical geog or #, 4 cr

**Instructor:** BROWN D

**Dist Req:** none

The course examines: 1) how and why various aspects of water resources vary in both space and time; 2) what lies behind water resources data and how various errors affect its reliability and significance; 3) how human activities directly and indirectly affect water resources; 4) how natural environmental changes alter water resources; 5) how social structures of public policy and

law affect water resources and how they vary geographically; and 6) basic methods of water resources analysis. The course is structured to develop a geography of water resources rather than present one. The various projects are designed to acquaint students with the ways we know about the interconnectedness of water resource elements and the spatial and temporal variability of the elements. Each project is centered on a question about trends in water resources and in human activities that may affect them. The projects are also structured to help students appreciate the utility and limitations of both water data and methods of analysis and the constraints that scale imposes on analyses. This approach requires a strong mutual effort of class participation based on timely preparation.

**Class time:** 30% lecture, 50% discussion, 20% laboratory

**Workload:** 40 pages of reading per week, 1 exam, 1 paper, 6 analysis projects

**Grade:** 30% final exam, 25% written reports/papers, 15% class participation, 30% analysis projects

**Exam format:** essay - from list of distributed questions or a take-home exam

### **GEOG 5605 GEOGRAPHICAL PERSPECTIVES ON URBAN PLANNING I**

(Sec 1) 4 cr

**Instructor:** MILLER R

**Dist Req:** none

This course provides a comparative examination of planning theories and practices in reshaping the geography of 19th and 20th century cities in different national settings (Europe, North America and selected Third World countries). After a brief introduction to the development of urban form through 1870, we concentrate on the rise of planning as a formal discipline in several European and North American contexts. The course stresses the ways in which planners and planning ideologies have responded to different social, economic, and political pressures, and how models of planning produced in the developed world have been transferred to (and often imposed upon) developing nations.

**Class time:** 75% lecture, 15% discussion, 10% laboratory

**Workload:** 150 pages of reading per week, 1 exam, 1 paper, 2 short written exercises

**Grade:** 30% final exam, 50% written reports/papers, 20% special projects

**Exam format:** essay, short answer, multiple choice

## **GEOLOGY AND GEOPHYSICS**

### **GEO 1021 INTRODUCTION TO GEOLOGY LAB: GEOLOGY OF MINNESOTA**

(Sec 1-16) prereq 1001 or # or #, 1 cr

**Instructor:** STAFF

**Dist Req:** (CLA: B) (IT: B) (CSOM: B)

This one-credit laboratory course is designed to teach students about the geology of Minnesota through hands-on activities and demonstrations. Students will learn to identify rocks and minerals, read topographic maps, and will complete simulated field studies in glacial geology, petroleum exploration, and landfill siting. One lab session includes a short campus field trip. Students are encouraged to work in small groups to learn the material and

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*Look for UCIP on the University Computer Network via Gopher*

complete lab exercises. The laboratory manual, "Geology of Minnesota: A Physical Geology Laboratory Manual", is available at Beckwith Copy Center on Washington Ave.

**Class time:** 100% laboratory

**Workload:** 10 pages of reading per week, 3 quizzes

**Grade:** 80% quizzes, 15% lab work, 5% class participation

**Exam format:** short answer

### GEO 5505 SOLID EARTH GEOPHYSICS I

(Sec 1) prereq 1111, Phys 1253, 4 cr

Instructor(s): KARATO S, YUEN D

Dist Req: none

This course discusses the structure and constitution of the solid Earth. The major source of information as to the Earth's interior is seismology. We discuss fundamentals of elastic wave propagation in layered materials including body waves, surface waves and free oscillation. These data will then be interpreted in terms of the physical conditions (pressure, temperature and chemical composition) of the Earth through the use of solid state theories. Emphasis is on the equation of state under high pressure and pressures. We shall also discuss geochemical constraints on the constitution of the Earth. Texts: D. Gubbins "Seismology and Plate Tectonics" Cambridge; J-P. Poirier "Introduction to the Physics of the Earth's Interior" Cambridge.

**Class time:** 90% lecture, 10% discussion

**Workload:** 15 pages of reading per week, 2 papers

**Grade:** 50% written reports/papers, 50% problem solving

**Exam format:**

### GEO 5601 LIMNOLOGY

(Sec 1) §EEB 5601; prereq Chem 1052 or equiv, 4 cr

Instructor: SHAPIRO J

Dist Req: none

Limnology is the science of lakes. The course begins with lake formation, then describes the physical attributes of water bodies, such as stratification as a result of solar radiation, water movements, etc. After a brief introduction to lake biology the chemical attributes are described, following which considerable time is spent once more on the organisms living in lakes, and their interrelations with the physical and chemical conditions. Finally, a series of case studies of lake restoration illustrate how all of the information taught is necessary to successful lake management and restoration. The aim of the course is to present lakes as ecosystems and to illustrate the need to understand how all aspects interact.

**Class time:** 85% lecture, 15% discussion

**Workload:** 30 pages of reading per week, 2 exams, 8-10 scientific papers are to be read and are included in the exams

**Grade:** 30% mid-quarter exam(s), 70% final exam

**Exam format:** short answer questions that require the students to integrate various aspects of what they have been taught

## GERMAN

### GER 1101 BEGINNING GERMAN

(Sec 1-9) §1000, 5 cr

Instructor: STAFF

Dist Req: none

We will be using a brand new textbook entitled "Kreise" which deals with Germany (post -(re)unification). Along with this textbook we use a German cultural reader called "Schriftbilder" which focuses on life in Germany, the university system, and the student movement in the late sixties. Courses GER 1101, GER 1102 and GER 1103 focus on student-to-student interaction and small group work activities. We focus on the four major language skills (speaking, writing, listening and reading) as well as on German (and German-speaking) cultures. We take a process-oriented approach to writing which includes a system of peer evaluation.

**Class time:** mostly discussion and student involvement and interaction

**Workload:** expect 2 hours of homework per day

**Grade:** not yet determined

**Exam format:**

### GER 1102 BEGINNING GERMAN

(Sec 1-2) §1110; prereq 1101 or 1000, 5 cr

Instructor: STAFF

Dist Req: none

The first year language sequence develops all four language skills -speaking, writing, listening, reading - as well as culture. The main text-book for the sequence is "KREISE" (Heinle & Heinle, 1992). There will also be a supplementary story each quarter from the culture reader "Schriftbilder". In German 1102 and 1103 we begin to focus on writing. Students write both essays and other writing assignments. These writing assignments are process-oriented and students work together in groups. The first year language sequence relies heavily on student interaction, partner activities, and group work. We expect an average of 2 hours work outside of class for each class session.

**Class time:** very interactive

**Workload:** 2 hours expected per class session

**Grade:** 20% final exam, 32% quizzes, 25% class participation, 13% reading/group work assignments, 4% essays, 6% writing assignments

**Exam format:** varies

### GER 1103 BEGINNING GERMAN

(Sec 1-4) §1110; prereq 1102 or 5 cr of 1110, 5 cr

Instructor: STAFF

Dist Req: none

The first year language sequence develops all four language skills -speaking, writing, listening, reading - as well as culture. The main text-book for the sequence is "KREISE" (Heinle & Heinle, 1992). There will also be a supplementary story each quarter from the culture reader "Schriftbilder". In German 1102 and 1103 we begin to focus on writing. Students write both essays and other writing assignments. These writing assignments are process-oriented and students work together in groups. The first year language sequence relies heavily on student interaction, partner activities, and group work. We expect an average of 2 hours work outside of class for each class session.

**Class time:** very interactive

**Workload:** 2 hours expected per class session

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**Grade:** 20% final exam, 32% quizzes, 25% class participation, 11% reading/group work assignments, 6% essays, 6% writing assignments

**Exam format:** varies

### GER 1104 INTERMEDIATE GERMAN

(Sec 1-5) prereq 1103 or 10 cr of 1110 or Entrance Standard proficiency test, 5 cr

Instructor: STAFF

Dist Req: none

**Special features include:** cultural history, small group work, process-oriented writing, peer evaluation, one-act play production, short film production, feature film viewings.

**Class time:** varies with instructor

**Workload:** 25 pages of reading per week, 4 exams, 6 short essays

**Grade:** 20% final exam, 15% written reports/papers, 10% special projects, 30% quizzes, 25% class participation

**Exam format:** grammatical structure items and essays

### GER 1105 INTERMEDIATE GERMAN

(Sec 1-2) prereq 1104 or placement, 5 cr

Instructor: STAFF

Dist Req: none

**Special features include:** cultural history, small group work, process-oriented writing, peer evaluation, one-act play production, short film production, feature film viewings.

**Class time:** varies with instructor

**Workload:** 25 pages of reading per week, 4 exams, 6 short essays

**Grade:** 20% final exam, 15% written reports/papers, 10% special projects, 30% quizzes, 25% class participation

**Exam format:** grammatical structure items and essays

### GER 1106 INTERMEDIATE GERMAN

(Sec 1-3) prereq 1105 or placement, 5 cr

Instructor: STAFF

Dist Req: none

**Special features include:** cultural history, small group work, process-oriented writing, peer evaluation, one-act play production, short film production, feature film viewings.

**Class time:** varies with instructor

**Workload:** 25 pages of reading per week, 4 exams, 6 short essays

**Grade:** 20% final exam, 15% written reports/papers, 10% special projects, 30% quizzes, 25% class participation

**Exam format:** grammatical structure items and essays

### GER 3341H PROSEMINAR IN GERMAN

(Sec 1) prereq #, non honors students may enroll with #, 4 cr

Instructor: TARABA W

Dist Req: none

This course normally has a class size of 6 to 8 students. Due to the small number of participants and their standing as honor students, the class discussions are very active. Each session a carefully prepared oral presentation is given on that day's assignment which is then discussed by the group. Every student gives one presentation per quarter, the remaining sessions are lectures by the instructor. The main theme is "The Artist and his/her Role in Society." The following works are analyzed in-depth: Goethe, 'Torquato Tasso,' 'Grillparzer,' 'Der arme Spielmann,' Eichendorff, 'Aus dem Leben eines Taugenichts,' Buchner, 'Lenz,' Mann, 'Der

Tod in Venedig,' Kafka, 'Ein Hungerkünstler,' Morike, 'Mozart auf der Reise nach Prag.'

**Class time:** 30% lecture, 40% discussion, 30% student presentations

**Workload:** 100 pages of reading per week, one oral presentation

**Grade:** 50% in-class presentations, 50% class participation

**Exam format:**

### GER 3604 LITERATURE, HISTORY, AND THE GERMAN FILM

(Sec 1) no knowledge of German req, 4 cr

Instructor: MCCORMICK R

Dist Req: none

This is an introductory course in German cinema in which a) students will be introduced to film analysis; b) cinematic form will be compared with literary form; and c) the representation of German history will be examined in both media. One of the unique characteristics of the West German cinema has been the activity of its women filmmakers. Proportionally speaking, West Germany--before unification with East Germany--had more women filmmakers than any other national cinema. The course this fall will focus on films by German women. We will look at films by the directors Margarethe von Trotta, Helma Sanders-Brahms, Jutta Bruckner, Leontine Sagan, Ulrike Ottinger, and Marianne Rosenbaum. The course will be taught in English. German majors and minors can get German Credit by doing some extra work. Texts: Bordwell/Thompson, 'Film Art', 3rd ed.; Heinrich Boll's novel 'The Lost Honor of Katharina Blum'; Christa Winsloe's play 'Girls in Uniform'; xeroxed materials.

**Class time:** 50% lecture, 50% discussion, this course will be taught in English

**Workload:** 50 pages of reading per week, 1 exam, 1 paper

**Grade:** 45% final exam, 10% class participation, 45% 5-10pp paper, German majors and minors can get German credit by doing extra work

**Exam format:** take-home essay

### GER 5011 ADVANCED COMPOSITION AND CONVERSATION

(Sec 1) prereq 3013, 4 cr

Instructor: FIRCHOW E

Dist Req: none

This course is devised for undergraduate and graduate students who need to continue to work on their language skills. The course reviews pertinent questions in German grammar and style. Students are required to write a number of essays based on subjects covered in class. The standard Duden Grammar is used as a handbook for grammatical information, and there are a number of textbooks used containing exercises in vocabulary, syntax and style. The readings for this course are usually taken from German newspapers and journals such as die Zeit, der Spiegel, etc. Students are also required to represent oral reports in class on various subjects. Since the background of participating students often differs considerably, a lot of personal attention has to be given by the instructor.

**Class time:** there is little time devoted to lectures - most time is devoted to discussion and reports

**Workload:** pages of reading varies from week to week, six to eight weekly essays per quarter

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**Grade:** based on attendance and participation in class, preparation, oral reports, written essays

**Exam format:**

## GREEK

### GRK 5350 GREEK LITERATURE: PHILOSOPHY

(Sec 1) max 12 cr, 4 cr

Instructor: KEULS E

Dist Req: none

Passages by Plato, Aristotle, and others read in Greek.

**Class time:** 10% lecture, 10% discussion, 80% supervised translation (by students)

**Workload:** 20 pages of reading per week

**Grade:** 40% mid-quarter exam(s), 40% final exam, 20% class participation

**Exam format:** translation of short passages, one essay

## HEBREW

### HEBR 1012 BEGINNING HEBREW FOR STUDENTS WITH PRIOR EXPOSURE

(Sec 1) §1101-1102-1103, total 15 cr for students who complete the sequence, 5 cr

Instructor: SHENDAR J

Dist Req: none

Hebrew 1012 is the first in the sequence of two courses in Modern Hebrew for students with prior exposure. Students who complete the sequence will receive 15 credits. Emphasis this quarter will be given to the review of reading and writing skills, acquisition of vocabulary to facilitate simple conversation and simple written assignments, as well as the introduction and usage of grammatical forms, such as: nouns, adjectives, verb inflections in the different tenses and verb shapes. Stress will be given to listening and reading comprehension. However, students will be encouraged to take active part in class. Remember communication is the name of the game! Text: "Hebrew for Americans" by Jonathan Paradise, (purchased at Alpha Print).

**Class time:** 10% lecture, 70% discussion, 20% listening to audio tapes

**Workload:** 2 exams, language lab, weekly quizzes, weekly papers

**Grade:** 20% mid-quarter exam(s), 30% final exam, 20% written reports/papers, 20% quizzes, 10% class participation

**Exam format:** written form on weekly quizzes, dictation exercises (no multiple choice)

### HEBR 3015 ADVANCED MODERN HEBREW

(Sec 1) prereq 3013 or #, 4 cr

Instructor: SHENDAR J

Dist Req: none

The course is designed to prepare the students to read various Hebrew genre; Biblical texts, Biblical commentary, contemporary Hebrew prose and literature, essays and news articles. There will be much emphasis on widening of vocabulary and study of expressions and idioms. Grammar will be taught in direct relation to the material read in class. Text: S.I. Agnon "Five Short Stories",

"Anthology of Hebrew Prose and Poetry" Mifgashim Prof Adve Coehn, Bible.

**Class time:** 10% lecture, 80% discussion, 10% language laboratory

**Workload:** 10 pages of reading per week, 2 exams, 10 papers, weekly quizzes

**Grade:** 20% mid-quarter exam(s), 30% final exam, 20% written reports/papers, 20% quizzes, 10% class participation

**Exam format:** essay

## HINDI

### HNDI 5161 ADVANCED HINDI

(Sec 1) prereq 3033 or 5133 or #, 4 cr

Instructor: JUNGHAREI !!CLA Distinguished Teacher Award!!

Dist Req: none

Reading and discussion of short stories and other literature. In lecture, information on authors and their place in the history of Hindi literature.

**Class time:** 10% lecture, 20% discussion, 70% translation; reading and writing short essays

**Workload:** 10 pages of reading per week, 2 exams, weekly homework

**Grade:** 30% written reports/papers, 20% class participation, 50% weekly assignments

**Exam format:** essay-translations-reports

## HISTORY

### HIST 3031 MEDICINE AND DISEASE IN HISTORY

(Sec 1) §HMed 3001, 4 cr

Instructor: EYLER J

Dist Req: (CSOM: C)

This course is the first quarter of a year's introduction to the history of disease and to the social and intellectual history of European and American medicine. It is designed to form a part of a general liberal arts education, and it presupposes no special technical knowledge of the biomedical sciences. The three quarters in the sequence form a chronological chain, but one quarter can be taken without prior enrollment in its predecessors. The focus of Hist 3031 is from classical antiquity to the late seventeenth century. We will investigate the development of knowledge of the human body and rational systems of explaining and dealing with disease and injury. We will also consider the role of religious beliefs and other cultural forces in the response to disease in Western tradition. The history of bubonic plague in Europe will provide a special opportunity to study how disease, social condition, and intellectual change are related.

**Class time:** 75% lecture, 15% discussion, 10% film and slides

**Workload:** 100 pages of reading per week, 2 exams

**Grade:** 40% mid-quarter exam(s), 60% final exam

**Exam format:** essay

### HIST 3151 HISTORY OF THE BRITISH ISLES

(Sec 1-3) 4 cr

Instructor: LEHMBERG S !!CLA Distinguished Teacher

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**Award!!**

Dist Req: (CLA: C) (IT: C) (CSOM: C)

Covers English history from the Anglo-Saxons through the Norman conquest, medieval developments, the origins of Parliament, the Reformation and the beginnings of the political crises of the 17th century. Also covers the other parts of the British Isles: Wales, Scotland and Ireland. Three lectures and a discussion section each week. For this quarter only, there will be two paperback textbooks and a book of readings.

**Class time:** 75% lecture, 25% discussion

**Workload:** 65 pages of reading per week, 2 exams, section assignments determined by TA, quizzes in sections

**Grade:** 25% mid-quarter exam(s), 50% final exam, 25% work done in sections

**Exam format:** essay

### **HIST 3281 INTELLECTUAL AND CULTURAL HISTORY OF MODERN EUROPE**

(Sec 1) §Hum 3281, 4 cr

Instructor: THAYER J

Dist Req: (CLA: C) (IT: C) (CSOM: C)

This is 1st quarter of 3 quarter sequence dealing with logical, epistemological and philosophical issues of the historical, social and natural sciences since the late 17th century. Issues of aesthetics and criticism are also treated. Students need not, and generally have not, taken the qtrs in sequence, nor necessarily taken all 3 qtrs. No prereq. Class size varies from a maximum of 90-100 to a minimum of 30-40, depending on qtr and readings assigned. Students who shy away from paper-writing courses should be advised that the grade for each qtr's work rests solely on single paper presented at time of scheduled final exam. No in-class exam. Given the difficulty of some of the readings, lists of questions are handed out for each of assigned readings. These questions are not to be answered, but serve as guides to most significant passages in texts. The course is also a training in reading what at first glance may appear to be highly specialized, even esoteric discussion. But experience has shown that papers produced in this course are of a very high order of stylistic and analytic clarity.

**Class time:** 90% lecture, 10% discussion

**Workload:** 1 exam

**Grade:** 100% final exam

**Exam format:** a paper describing and comparing the major concepts of the assigned readings

### **HIST 3463 INTRODUCTION TO EAST ASIA IN MODERN TIMES**

(Sec 1) §1463, EAS 1463, 4 cr

Instructor(s): FARMER E !!Morse Alumni Teaching Award Winner!!, MARSHALL B

Dist Req: (CLA: C) (IT: C) (CSOM: C)

This course surveys the modern history of China, Japan, Korea and Vietnam. It looks at the collapse of the traditional order in the 19th Century, colonialism, the modernization of Japan, World War II, communism in China and the war in Vietnam.

**Class time:** 60% lecture, 30% discussion, 10% slides

**Workload:** 80 pages of reading per week, 3 exams, 1 paper, 1 map exercise

**Grade:** 40% mid-quarter exam(s), 30% final exam, 30% written reports/papers

**Exam format:** 20% identification, 80% essay

### **HIST 3465 CHINA'S RESPONSE TO THE WEST, 1750-1911**

(Sec 1) §5465, EAS 3465, 4 cr

Instructor: WALTNER A

Dist Req: none

This course will examine the social, intellectual and political history of China from 1750 to 1911. In chronicling the decline of the last Chinese dynasty, we will look at the internal logic of Chinese history as well as examining the impact of western ideas and institutions on Chinese society. Western imperialism, eighteenth century population growth, internal rebellion and reform movements are all topics we will address. We will look at a variety of ways of conceptualizing social change. The class format will be a mixture of lecture and discussion. Students will be asked to do several short writing assignments using primary documents as their sources. I encourage students to use their imaginations in these assignments. Much of the assigned reading will be primary sources, including fiction. We will read portions of the eighteenth century novel "The Story of the Stone"; Philip Kuhn's "Soulstealers", which discusses a sorcery episode; Pamela Crossley's "Orphan Warriors", which deals with the question of Manchu ethnicity, as well as other texts which deal with ordinary life in nineteenth century China.

**Class time:** 80% lecture, 20% discussion

**Workload:** 100 pages of reading per week, 2 exams, 2 papers

**Grade:** 30% mid-quarter exam(s), 40% final exam, 30% written reports/papers

**Exam format:** identification of terms and essay

### **HIST 3468 PEOPLE'S REPUBLIC OF CHINA: THE COMMUNIST REVOLUTION, 1900 TO PRESENT**

(Sec 1) §5468, EAS 3468, 4 cr

Instructor: FARMER E !!Morse Alumni Teaching Award Winner!!

Dist Req: none

The main purpose of this course is to provide the student with an overview of the communist phase of the Chinese revolution, including some fundamentals of Marxism-Leninism, events in the revolution, the development of the Chinese Communist Party, the thought of Mao Zedong, the Chinese social system, and aspects of current development policies. Secondary goals include reading and discussion of Chinese literature and descriptions of Chinese life, a consideration of the nature of a revolutionary society, the study of a non-Western culture, and the opportunity to write a paper.

**Class time:** 80% lecture, 10% discussion, 10% slides

**Workload:** 80 pages of reading per week, 2 exams, 1 paper, 1 map exercise

**Grade:** 20% mid-quarter exam(s), 30% final exam, 50% written reports/papers

**Exam format:** 20% identification; 80% essay

### **HIST 3474 RISE OF MODERN JAPAN, 1853-1914**

(Sec 1) §EAS 3474, 4 cr

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*Look for UCIP on the University Computer Network via Gopher*

**Instructor:** MARSHALL B

**Dist Req:** none

To introduce the student to the historical experience of Japan during the Meiji "revolution"-a transition from the "traditional" society of the Tokugawa shogunate (1600-1867) to the "modern" culture of the Meiji period (1868-1912). The first third of the course will explore the internal social, cultural and political changes as well as foreign intrusion which destroyed the old regime. It will then be possible to examine the native sources as well as the Western influences that produced Japan's constitutional monarchy, parliamentary institutions, industrial economy, modern social structure and overseas conquests. Finally the course will explore the legacy of the Meiji period for 20th century Japan, discussing the signs of social and cultural stress stemming from these "successes." No prereqs. The course is designed with three types of undergrads in mind. It is a self-contained introduction for the general liberal arts undergrad as well as those intending to go on in, e.g., the School of Management or Journalism. It will also continue to fulfill one of the major requirements for History majors. Finally, majors in East Asian Studies and the new Asian track of the Int'l Relations can continue to use it to complete their requirements.

**Class time:** 90% lecture, 10% discussion

**Workload:** 100 pages of reading per week, 2 exams, 1 paper

**Grade:** 30% mid-quarter exam(s), 50% final exam, 20% written reports/papers

**Exam format:** essay

### **HIST 3484 HISTORY OF SOUTHEAST ASIA**

(Sec 1) 4 cr

**Instructor:** KOPF D

**Dist Req:** none

This is the only course at the U of M which covers the history of the geo-cultural region known as Southeast Asia from the earliest known period to as close to the present as we can get without violating historical perspective. Often Southeast Asia is predominantly about Vietnam because of the American war against that nation. This course deals with the history of the entire region not from the point of view of American foreign policy in Vietnam but from the point of view of Southeast Asians themselves and their own history over thousands of years. The peoples and cultures of Burma, Thailand, Malaysia, Indonesia, Cambodia, Vietnam and the Phillipines are depicted in a way which is expressed in their own historiographical traditions. The professor brings to his lectures his extensive knowledge of the area from years of study and travel. His vast collection of slides and videos are integrated into the course.

**Class time:** 70% lecture, 20% discussion, 10% slides, video

**Workload:** 60 pages of reading per week, 2 exams, 1 paper, map of Southeast Asia; paper is optional

**Grade:** 25% mid-quarter exam(s), 25% final exam, 25% class participation, 25% world map; extra credit paper

**Exam format:** essay

### **HIST 3651 HENRY VIII AND THE ENGLISH REFORMATION**

(Sec 1) 4 cr

**Instructor:** LEHMBERG S !!CLA Distinguished Teacher

**Award!!**

**Dist Req:** (IT: C) (CSOM: C)

This is a proseminar, intended for graduate students and honors undergraduates. It is the first part of a three-quarter sequence; Hist. 3651 covers the period 1485-1547, the reigns of Henry VII and Henry VIII. This principal historical writings about this period will be read and discussed.

**Class time:** 20% discussion, 80% student reports

**Workload:** 300 pages of reading per week, 6 papers

**Grade:** 50% written reports/papers, 50% in-class presentations

**Exam format:** no exams

### **HIST 3704 DAILY LIFE IN EUROPE, 1348-1750**

(Sec 1) 4 cr

**Instructor:** PHILLIPS C

**Dist Req:** (CLA: C) (IT: C) (CSOM: C)

Under the broad heading of "Daily Life in Europe," this course examine various key issues in the social and economic history of European peoples between the Black Death and the Industrial Revolution. An examples of historical questions addressed include: What was the demographic experience of Europeans in these centuries--their rates of birth, marriage, and death? What effect did epidemics and wars have on population size? How did fluctuations in population size relate to other key variables in economy and society, such as agricultural productivity and price levels? How did people make a living? How did they live? How did their standards of living change over time? How was society structured and what were relations like between social classes? How and why did ordinary people rebel against governments and the privileged classes? What results did these rebellions have? These and other questions shape the lectures and readings in the course.

**Class time:** 100% lecture

**Workload:** 150 pages of reading per week, 2 exams, 1 paper

**Grade:** 22% mid-quarter exam(s), 44% final exam, 34% written reports/papers

**Exam format:** essay

### **HIST 3721 EUROPE IN THE ERA OF WORLD WAR I**

(Sec 1) 4 cr

**Instructor:** MUNHOLLAND J !!CLA Distinguished Teacher  
**Award!!**

**Dist Req:** none

This course is a general survey of European political history during the era of WWI. It begins with a lengthy discussion of the background to the outbreak of war by considering the political structures and social composition of Europe from the 1870s to 1914. The internal, domestic problems of the major European powers are considered along with the rise of socialism, the impact of European imperialism at home and abroad as well as a brief consideration of the international and diplomatic strains that existed among the powers. The course then analyzes the impact of war and revolution on the European people with emphasis upon the political and social impact of warfare rather than upon the more technical aspects of battle and military campaigns. The course concludes with a discussion of the war's effects upon European societies, notably Germany, Eastern Europe, the Soviet Union and the Western allies. In the final stages of the course we

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discuss the conditions that gave rise to fascism and other authoritarian political movements, revealing the fragility of the peace established in 1919. Each class lecture is devoted to a single topic.  
**Class time:** 90% lecture, 10% discussion, question and answer period

**Workload:** 150 pages of reading per week, 2 exams, 2 papers

**Grade:** 20% mid-quarter exam(s), 40% final exam, 40% written reports/papers

**Exam format:** essay with short answer identification and significance items; students have a choice of essays and of ident/signif items

### **HIST 3844 AMERICAN ECONOMIC HISTORY, COLONIAL PERIOD TO CIVIL WAR**

(Sec 1) 4 cr

Instructor: GREEN G !!Morse Alumni Teaching Award Winner!!

Dist Req: none

The course involves in-depth analysis of five topics in American economic history before 1865: economic growth and regional specialization, slavery, railroads, the role of government in economic development, and the economic impact of the Civil War. For each topic students need a set of short analyses by scholars, reflecting diverse methods, theories and interpretations. On four of the five topics they write a 4-5 page review essay and interpretation. Then we spend several class sessions discussing the topic together (with a little background lecturing from me where needed) while they start reading for the next topics.

**Class time:** 20% lecture, 80% discussion

**Workload:** 120 pages of reading per week, 4 papers

**Grade:** 80% written reports/papers, 20% class participation

**Exam format:**

### **HIST 3955 INTRODUCTION TO HISTORICAL RESEARCH**

(Sec 2) prereq Δ, to be taken prior to 3961, 4 cr

Instructor: THAYER J

Dist Req: none

Course is limited to history majors. It is the first of a two-quarter sequence during which the student prepares and writes the senior research paper required of all history majors. The Department of History usually has four sections of History 3955, each taught by a different professor. Students should inquire of each instructor as to the format of that particular section. Customarily, however, 3955 will introduce the student to major aspects of historical method, including controversies among historians as to just what in the field should be viewed as a professional discipline. In addition to this theoretical component, students in 3955 select the topic for their major paper; learn how bibliography is gathered; prepare a bibliography for their chosen topic; are made familiar with professional stylistics - footnoting, etc; and present also to the class, and in writing, a statement describing their project and its significance for them, and for the profession generally. Visits to libraries and archives, guided by members of the Library and Archival staff, are often included. Readings in the history of historiography and style manuals are the only books usually required.

**Class time:** 10% lecture, 20% discussion, 70%

**Workload:** given the format no general estimate can be given

**Grade:** 70% written reports/papers, 10% in-class presentations, 20% class participation

**Exam format:**

### **HIST 5171 MODERN ENGLAND: 1783 TO PRESENT**

(Sec 1) 4 cr

Instructor: ALTHOLZ J

Dist Req: (CSOM: C)

1783 to 1846 (merges into 5172). The triumph of the middle class; industrialization and political reform. Primarily for undergraduates, but offered at 5-level for graduate students in English. Textbook: R. K. Webb, "Modern England".

**Class time:** 100% lecture

**Workload:** 40 pages of reading per week, 2 exams, 1 paper

**Grade:** 25% mid-quarter exam(s), 50% final exam, 25% written reports/papers

**Exam format:** 70% essay(s); 30% short identifications

### **HIST 5334 AMERICAN LEGAL HISTORY**

(Sec 1) 4 cr

Instructor: MURPHY P !!CLA Distinguished Teacher Award!!

Dist Req: none

This course is an advanced course, offered at the undergraduate/graduate level, dealing with the social history of American law, from its backgrounds in England to the present. It considers both those factors which have affected the development of American law and the impacts which a dynamic legal system has had on the American people over time. In contrast with my course in American Constitutional History, which stresses public law and public policy, this course emphasizes private law and its role in societal development. The lectures form the basis and structure of the course but students also read a textbook and excerpts from a casebook of readings on Legal History. Class discussion is encouraged. Reading is moderately heavy. This is a general information course although it has a pre-law focus. Prior legal training is not required.

**Class time:** 90% lecture, 10% discussion

**Workload:** 100 pages of reading per week, 2 exams, 1 paper

**Grade:** 25% mid-quarter exam(s), 40% final exam, 35% written reports/papers

**Exam format:** essay

### **HIST 5349 SOCIAL WELFARE IN AMERICA**

(Sec 1) §SW 5349, 4 cr

Instructor: CHAMBERS C !!Morse Alumni Teaching Award Winner!!

Dist Req: none

Advanced survey of social welfare from colonial day to the present. Focus on public assistance, poor relief, self-help agencies, institutions (prisons, almshouses, insane asylums, orphanages, reform schools, etc.), charities, settlement house movement, social security. Attention to race, nationality, religion, gender, and cultural values and norms. Process of professionalization of human services.

**Class time:** 80% lecture, 20% discussion

**Workload:** 150 pages of reading per week, 2 exams, 1 paper

**Grade:** 20% mid-quarter exam(s), 50% final exam, 30% written reports/papers

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**Exam format:** essay

### **HIST 5465 CHINA'S RESPONSE TO THE WEST, 1750-1911**

(Sec 1) §3465, EAS 3465, 4 cr

Instructor: WALTNER A

Dist Req: none

Students who register for this course will do all of the coursework for History 3465. There will be additional meetings to discuss readings. Graduate students in Chinese literature and East Asian Studies are particularly encouraged to take this course.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

### **HIST 5630 INTRODUCTORY PROSEMINAR IN EARLY MODERN EUROPE**

(Sec 1) prereq #, 4 cr

Instructor: FARMER E !!Morse Alumni Teaching Award Winner!!

Dist Req: none

This is a comparative seminar in early modern history intended for graduate students. We will read and discuss theorists and some case studies from a variety of approaches: Marxist, World Systems Theory, biological agents, empires, mentalities, etc. Students will make presentations and write term papers.

**Class time:** 100% discussion

**Workload:** 200 pages of reading per week, 1 paper, 2 in-class presentations, precis

**Grade:** 70% written reports/papers, 30% class participation

**Exam format:**

### **HIST 5793 READINGS IN EUROPEAN ECONOMIC HISTORY, 1750-THE PRESENT**

(Sec 1) prereq #, 4 cr

Instructor: GOOD D

Dist Req: none

First in a two quarter sequence that examines the origins, diffusion and consequences of modern economic growth in Europe. Topics in 5793 include the rise of capitalism, Europe and the world economy after 1500, the British industrial revolution, society and economy in the 19th century, the state and economic development. Course designed for graduate students. No prerequisite but prior course work at either the undergraduate or graduate level in either European history, economics, or economic history is highly recommended. Weekly discussions of assigned readings introduced by student presentations.

**Class time:** 100% discussion

**Workload:** 150 pages of reading per week, 4 papers

**Grade:** 70% written reports/papers, 15% in-class presentations, 15% class participation

**Exam format:**

## **HISTORY OF SCIENCE & TECH**

### **HSCI 1711 TECHNOLOGY AND WESTERN CIVILIZATION: ANCIENT AND MEDIEVAL**

(Sec 1-6) §3711, 4 cr

Instructor: LAYTON E

Dist Req: (CLA: C) (IT: C) (CSOM: BC)

This course is a history of technology from earliest times through the Middle Ages emphasizing the social role of technology. The basic strategy is to trace a series of technological and social revolutions in history, including the invention of agriculture, the discovery of metals, technology's role in the rise of Greece, the Roman Empire, and in the Middle Ages. It addresses questions including: What makes humans human? How was society changed by the discovery of metals? What was the impact of the discovery of irrigation? Why did democracy appear during the iron age in Greece? How did technology influence the Rise of Rome? What were the technological roots of the ecological crisis of the ancient world associated with the fall of Rome? Why was there a power revolution in the Middle Ages? How was this power revolution one of the roots of the Industrial Revolution?

**Class time:** 75% lecture, 25% discussion

**Workload:** 30 pages of reading per week, 2 exams, 1 paper, 2 book critiques not more than 3 pages

**Grade:** 20% mid-quarter exam(s), 40% final exam, 20% written reports/papers, 20% evaluation by TA--includes discussion in discussion section

**Exam format:** both take home essay exams

### **HSCI 1811 INTRODUCTION TO HISTORY OF SCIENCE: ANCIENT**

(Sec 1-6) §3811, 4 cr

Instructor: SHAPIRO A

Dist Req: (CLA: C) (IT: C) (CSOM: BC)

This first quarter of a three-quarter sequence is devoted to ancient science; each quarter of the sequence may be taken independently of the others. The development of the various sciences (for example, mathematics, astronomy, and biology) and the changing nature of science itself are placed in their cultural context, especially in relation to philosophy, religion, and social structures. The course covers Babylonian, Egyptian, and Greek science. In addition to the exams, students are assigned two essays (3-5 pages long), which serve to synthesize the material covered, ten days before they are due.

**Class time:** 75% lecture, 25% discussion

**Workload:** 35 pages of reading per week, 2 exams, 2 papers

**Grade:** 20% mid-quarter exam(s), 35% final exam, 35% written reports/papers, 10% class participation

**Exam format:** essay

### **HSCI 3711 TECHNOLOGY AND WESTERN CIVILIZATION: ANCIENT AND MEDIEVAL**

(Sec 1-6) §1711, 4 cr

Instructor: LAYTON E

Dist Req: (CLA: C) (IT: C) (CSOM: BC)

This course is a history of technology from earliest times through the Middle Ages emphasizing the social role of technology. The basic strategy is to trace a series of technological and social

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revolutions in history, including the invention of agriculture, the discovery of metals, technology's role in the rise of Greece, the Roman Empire, and in the Middle Ages. It addresses questions including: What makes humans human? How was society changed by the discovery of metals? What was the impact of the discovery of irrigation? Why did democracy appear during the iron age in Greece? How did technology influence the Rise of Rome? What were the technological roots of the ecological crisis of the ancient world associated with the fall of Rome? Why was there a power revolution in the Middle Ages? How was this power revolution one of the roots of the Industrial Revolution?

**Class time:** 75% lecture, 25% discussion

**Workload:** 30 pages of reading per week, 2 exams, 1 paper, 2 book critiques not more than 3 pages

**Grade:** 20% mid-quarter exam(s), 40% final exam, 20% written reports/papers, 20% evaluation by TA--includes discussion in discussion section

**Exam format:** both take home essay exams

### HSCI 3811 INTRODUCTION TO HISTORY OF SCIENCE: ANCIENT

(Sec 1-6) §1811, 4 cr

Instructor: SHAPIRO A

Dist Req: (CLA: C) (IT: C) (CSOM: BC)

This first quarter of a three-quarter sequence is devoted to ancient science; each quarter of the sequence may be taken independently of the others. The development of the various sciences (for example, mathematics, astronomy, and biology) and the changing nature of science itself are placed in their cultural context, especially in relation to philosophy, religion, and social structures. The course covers Babylonian, Egyptian, and Greek science. In addition to the exams, students are assigned two essays (3-5 pages long), which serve to synthesize the material covered, ten days before they are due.

**Class time:** 75% lecture, 25% discussion

**Workload:** 65 pages of reading per week, 2 exams, 2 papers

**Grade:** 20% mid-quarter exam(s), 35% final exam, 35% written reports/papers, 10% class participation

**Exam format:** essay

### HSCI 5924 HISTORY OF 19TH CENTURY PHYSICS

(Sec 1) §Phys 5924; prereq general physics or #, 4 cr

Instructor: STUEWER R

Dist Req: (CSOM: B)

The aim of this course is to study the history of physics (natural philosophy) during the 19th century. We begin with an overview of science in the 19th century, examining the social and political environments that existed and the institutions (including universities) that were either created or transformed to foster scientific teaching and research in Europe and the United States. We then look in detail at the major concurrent experimental discoveries and theoretical innovations that occurred in physics, setting them within the above contexts. These include the origin and development of the wave theory of light (1800-1830); the rise and fall of the caloric theory of heat (1780-1830); the birth of the modern atomic theory (1800-1860); the discovery of the first (energy) and second (entropy) laws of thermodynamics (1840-1870); the discovery or electromagnetism and the origin of field theory (1800-1890), and (time permitting) the birth of the kinetic theory and

statistical mechanics (1860-1880). To supplement the lectures, students read both original scientific papers and historical articles. Students gain an understanding of central concepts in physics and the broader conditions under which scientific knowledge is acquired.

**Class time:** 90% lecture, 10% discussion

**Workload:** 125 pages of reading per week

**Grade:** 20% mid-quarter exam(s), 20% final exam, 50% written reports/papers, 10% class participation

**Exam format:** take-home essay questions

## HONORS COLLOQUIA

### HCOL 1010 EXPLORING THE LANGUAGE OF IMAGES THROUGH ARTISTS' BOOKS

(Sec 1) prereq fr, soph, regis honors div, 2 cr

Instructor: SCOTT JOST

Dist Req: none

A work of art is conventionally thought of as unique and precious, as a single image that communicates the truth through form and highly specialized aesthetics. Yet as we are flooded with images in our daily lives, we rarely experience them in this way. Films, video, magazines, newspapers and advertising present clustered, juxtaposed, grouped and sequenced images that supply information, tell stories, and shape our attitudes and actions. How can we as artists not involved in these media understand and participate in that language of images? Can we use those same images that surround our lives as a vehicle to respond to personal and world events, for re-telling "official" stories, for expressing deeply felt emotions and desires? Can art from an individual's studio be something that actively engages the issues of daily life? Books provide a hybrid format in which artists can mix media and genres, images and text. In this course, students will develop experimental artists' books as a way to explore the role of image appropriation and use in art making. A wide variety of media will be used in conjunction with photocopying and collage to generate and manipulate images. Selected field trips, readings, and discussions. **Class time:** 25% lecture, 75% discussion, some class time may be devoted to lab work

**Workload:** projects; varies readings

**Grade:**

**Exam format:**

### HCOL 1030 WHAT'S HUMAN IN THE HUMANITIES?

(Sec 1) prereq fr, soph, regis honors div, 2 cr

Instructor: CAROL MASON

Dist Req: none

This course invites you to think uncommonly about common, everyday images of and ideas about the human body. By examining literary, medical, legal, filmic, and anthropological representations of the human body, we'll be employing and interrogating some of the fundamental methods and assumptions used in disciplines traditionally known as the humanities. We'll also be exploring why so many authors, artists, and filmmakers represent "humanity" by focusing on what is not human: monsters, machines, animals, aliens. Our course is organized in three units, as follows: 1) Images of the Past: the Visual Text; 2) Politics of

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**Imagery:** the Literary Text; 3) Bodies of Knowledge: the Human Text.

**Class time:** 10% lecture, 10% closed-circuit TV, 60% discussion, 20% student presentations

**Workload:** 100 pages of reading per week, notebook: informal record of critical questions and responses

**Grade:** 33% in-class presentations, 33% class participation, 33% notebook

**Exam format:**

### **HCOL 1050 INTRODUCTION TO PSYCHOPHARMACOLOGY**

(Sec 1) prereq fr, soph, regis honors div, 3 cr

Instructor: ABUZZAHAB F

Dist Req: none

An introduction to the principles of action of psychoactive drugs, including their use in treatment of psychiatric disorders, their impact on society, treatment of drug abusers, alternative means of "turning-on" without drugs. A high school biology course would be helpful for students taking this course. Topics will include classification of psychoactive drugs, antidepressant and combination drugs, antipsychotic anticonvulsants, and abused drugs.

**Class time:**

**Workload:** 2 exams, 1 paper

**Grade:** 10% mid-quarter exam(s), 20% final exam, 70% written reports/papers

**Exam format:**

## **HONORS SEMINAR**

### **HSEM 3060 PRACTICING DEMOCRATIC EDUCATION**

(Sec 1) prereq jr, sr, reg honors div, 4 cr

Instructor: JAMES FARR

Dist Req: none

This course will address some long-standing debates about democratic theory, liberal education, and citizen service. The ideas in "Democracy and Education" by John Dewey, who thought of the polity as a large classroom and of the classroom as a small polity, will frame the discussions. Recent writings by Amy Gutmann, Benjamin Barber, Eric Gorham, and Harry Boyte will also be incorporated. Our concern, at the level of theory, lies at the intersection of democracy and citizenship, on the one hand, and education and service, on the other. The course will also address questions of democracy and education practically, in the form of an educational practicum. Students will put their education and democratic citizenship into practice by serving as coaches for middle-school students (at St. Bernard's Grade School in St. Paul) who will be researching and debating their own questions about democracy and social issues (in and around their school). The fundamental premise of the course is that we learn theoretically about citizenship and education in large part by being engaged practically as citizens and educators.

**Class time:**

**Workload:** 80 pages of reading per week, 1 exam, 1 notebook/journal, weekly coaching sessions

**Grade:** 40% final exam, 40% written reports/papers, 20% class participation, plus, required practicum

**Exam format:** essay

## **HORTICULTURE**

### **HORT 1036 PLANT PROPAGATION**

(Sec 1) 5 cr

Instructor: ASCHER P

Dist Req: none

This is a hands-on course. Students actually propagate hundreds of plants, using techniques ranging from planting seeds, through taking cuttings, layering, grafting, budding, and aseptic tissue culture. Most of the propagated plants become the property of the student. The overall objective of Plant Propagation is to teach the principles and practice of sexual and asexual propagation of plants, and in the process teach the basic biology of cells, cell division, cellular organization into tissue, tissue and organ response, whole organism response as it relates to plant growth and development, the relationship of plants and plant populations to the environment, and the implications of sexual versus asexual propagation on plant systems. A second, but not less significant objective, is to teach the scientific method, beginning with formation of an hypothesis and continuing through designing experiments to test the hypothesis, conducting the experiments, taking data, interpreting results, and sharing the results and interpretation with others. Course content ranges from molecules important in cell division to impact of environment, both macro and micro, on plant populations.

**Class time:** 25% lecture, 10% discussion, 65% laboratory

**Workload:** 20 pages of reading per week, 2 exams, writing for newsletter - 2 printed pages

**Grade:** 40% mid-quarter exam(s), 10% written reports/papers, 10% special projects, 40% lab work, optional final exam to replace up to 20% of lower grades; quizzes to resolve final grade

**Exam format:** open-book, take-home exams with 1 week to complete; mostly short answer and problem solving

### **HORT 3003 PLANT GENETICS AND IMPROVEMENT**

(Sec 1) prereq Biol 1009, 4 cr

Instructor: LUBY J

Dist Req: none

The purpose of this course is to cultivate an appreciation for the fundamental principles of genetics and genetic processes, the nature of variation and heredity in plants, the relationships of genetics to crop evolution and plant breeding practices, interactions of genotypes with the environment and the impact on crop performance, and the importance preserving wild germplasm.

**Class time:** 75% lecture, 25% laboratory

**Workload:**

**Grade:**

**Exam format:**

### **HORT 5001 HARVEST TO MARKET OF HORTICULTURAL CROPS**

(Sec 1) prereq PBio 3131, 3 cr

Instructor(s): LI P, TONG C

Dist Req: none

This course deals with what happens to horticultural crops (fruits,

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vegetables, and flowers) after they are grown, from the time someone decides they can be harvested through the time a consumer buys them. Some of the questions answered by this course are: How do you know something is ready for harvest? How do you keep commodities from dying before they get to the consumer? How does a retailer determine how a product is packaged by the grower/shipper? By the end of this course students should 1) understand the physiological and biochemical processes occurring after harvest until senescence and how this relates to handling procedures for different horticultural crops, 2) understand the importance of temperature, humidity, physical injury and atmosphere to postharvest shelf life, and 3) describe the roles of different people in the postharvest chain.

**Class time:** 70% lecture, 30% laboratory, includes field trips

**Workload:** 20 pages of reading per week, 2 exams, 1 paper, 1 project

**Grade:** 25% mid-quarter exam(s), 40% final exam, 15% written reports/papers, 20% special projects

**Exam format:** essay

### **HORT 5046 NURSERY MANAGEMENT I**

(Sec 1) 5046-5047-5048%; prereq 1021, 4 cr

**Instructor:** SWANSON B !!Morse Alumni Teaching Award Winner; also College of Ag Distinguished Teacher!!

**Dist Req:** none

Content of the course will include the nature of the industry, beginning and planning in the nursery business, and nursery management. Course will include several field trips to nurseries.

**Class time:** 40% lecture, 10% discussion, 50% laboratory

**Workload:** 10 pages of reading per week, 2 exams, 2 papers, 4 exercises

**Grade:** 20% mid-quarter exam(s), 27% final exam, 10% written reports/papers, 23% lab work, 10% class participation, 10% problem solving

**Exam format:** true/false, multiple choice, completion, matching

## HUMANITIES

### **HUM 1004 HUMANITIES IN THE MODERN WORLD IV**

(Sec 1) §Rhet 3381, 4 cr

**Instructor:** KLIGER G

**Dist Req:** (CLA: C) (IT: C) (CSOM: C)

Purpose of course is to acquaint students with interaction of rival ideologies, historical events, and forms of culture and society in Europe during the period in question. Representative works of the time which profoundly influenced thinking, feeling, and action will be examined in some detail and the relationships of competing ideologies to one another and type of practices they motivated will be explored. Following topics: Leninism and Bolshevik revolution; Stalinism and Moscow purges, 1936-38; Freud's theories of development of personality, neurosis, and nature of civilization, with particular emphasis on psychological causes of tension and conflict in society; Eliot's neo-orthodox nostalgia; Kafka's depiction of absurdity and dehumanization prevalent in twentieth century Western society; Fascist challenge to democracy; Spanish civil war and Picasso's attack on fascism and critique of contemporary society; Primo Levi's account of life in

a Nazi concentration camp and the Holocaust. A slide of Picasso's Guernica will be discussed.

**Class time:** 75% lecture, 20% discussion, 5% slide presentation and lecture/discussion

**Workload:** 108 pages of reading per week, 2 exams

**Grade:** 50% mid-quarter exam(s), 50% final exam

**Exam format:** take-home essays

### **HUM 3029 MUSIC IN THE 20TH CENTURY**

(Sec 1) §Mus 3029; prereq non-music maj, 4 cr

**Instructor:** JACKSON D

**Dist Req:** none

The objectives of this course are: 1) to survey the history of European/American music from the 1880s - present, incorporating the established canon and the radical avant garde, high-art and popular music, and the contributions of men and women as composers, performers, and subjects of musical compositions; 2) to encourage the re-examination of aesthetic assumptions by exploring a rich diversity of music from a comparative international perspective and by integrating the influences of non-western music on western composers; 3) to explore the molding of creative identities through contextual biographies of composers, accounting for race, class, and gender; 4) to provide a framework for active involvement in listening, focusing on representative compositions while developing an awareness of concurrent developments in the pictorial arts, dance, and literature. The course is divided into four units: Unit I-first three decades of 20th century, examining the origins of modernism in music (geographically); Unit II-emergence of national identities and aspirations in period between the wars (geographically); Unit III-IV-organized topically, moving through the peak years of post-war modernism and tracing the course of post-modernism.

**Class time:** 75% lecture, 25% discussion

**Workload:** 50 pages of reading per week, 3 papers

**Grade:** 100% written reports/papers

**Exam format:** take-home essay questions

### **HUM 3281 INTELLECTUAL AND CULTURAL HISTORY OF MODERN EUROPE**

(Sec 1) §Hist 3281, 4 cr

**Instructor:** THAYER J

**Dist Req:** none

This is 1st quarter of 3 quarter sequence dealing with logical, epistemological and philosophical issues of the historical, social and natural sciences since the late 17th century. Issues of aesthetics and criticism are also treated. Students need not, and generally have not, taken the qtrs in sequence, nor necessarily taken all 3 qtrs. No prereq. Class size varies from a maximum of 90-100 to a minimum of 30-40, depending on qtr and readings assigned. Students who shy away from paper-writing courses should be advised that the grade for each qtr's work rests solely on single paper presented at time of scheduled final exam. No in-class exam. Given the difficulty of some of the readings, lists of questions are handed out for each of assigned readings. These questions are not to be answered, but serve as guides to most significant passages in texts. The course is also a training in reading what at first glance may appear to be highly specialized, even esoteric discussion. But experience has shown that papers produced in this course are of a very high order of stylistic and

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analytic clarity.

**Class time:** 90% lecture, 10% discussion

**Workload:** 1 exam

**Grade:** 100% final exam

**Exam format:** a paper describing and comparing the major concepts of the assigned readings

### HUM 3910H TOPICS IN THE HUMANITIES

(Sec 80) prereq CLA Honors jr or sr or #, 4 cr

Instructor: KLIGER G

Dist Req: none

The seminar will explore a variety of visions of an ideal society (utopia) and its opposite (dystopia) in the writings of philosophers, novelists, psychologists, and social and cultural critics through the ages, from Plato to Orwell. Each perspective will be examined with regard to its fundamental assumptions about human nature, the nature of human institutions, and their potentials for good and evil. A central concern of the seminar will be to assess the degrees of actual or potential correspondence of these visions to the realities of individual and social existence.

**Class time:** 20% lecture, 80% discussion

**Workload:** 1 paper, a 10-15 page based on a presentation or 20 page research paper

**Grade:** 60% written reports/papers, 30% in-class presentations, 10% class participation

**Exam format:**

## INDUSTRIAL ENGINEERING

### IEOR 5010 INTRODUCTION TO WORK ANALYSIS

(Sec 1) prereq 3000, IT or grad, 4 cr

Instructor: BARNETT E

Dist Req: none

Objectives: 1) to learn and practice the more common approaches to the analysis and improvement of methods; 2) to gain a knowledge of time study, MTM and work sampling as used in the determination of engineered time standards; 3) to understand the development and use of standard data; 4) to learn the fundamentals of measured day work and wage incentive plans, their design, installation and administration; 5) to review gains sharing and white collar productivity, two of the newer areas of work analysis. Students work in 3-4 person groups for a number of activities including written case studies and presentations and term project.

**Class time:** 40% lecture, 40% discussion, 20% oral case presentations

**Workload:** 30 pages of reading per week, 4 exams, 3 papers, 3 oral presentations

**Grade:** 25% final exam, 15% special projects, 30% quizzes, 10% problem solving, 20% oral reports

**Exam format:** problems

### IEOR 5030 QUALITY CONTROL AND RELIABILITY

(Sec 1) prereq IT or grad stu, Math 1261, ME 3900...3000 rec, 4 cr

Instructor: DOOLEY K

Dist Req: none

This course will cover both the managerial and technical aspects

of quality improvement and associated statistical techniques. The student should have a background in introductory statistics.

**Class time:** 50% lecture, 25% discussion, 25% experiential exercises

**Workload:** 50 pages of reading per week, 1 paper, 6 homeworks

**Grade:** 30% written reports/papers, 70% problem solving

**Exam format:**

### IEOR 5254 DESIGN MORPHOLOGY WITH APPLICATIONS

(Sec 1) prereq completion of sequences ME 3201/3 or 5, ME 3303 or 5342, upper div mech engr maj, 4 cr

Instructor: MANTELL S

Dist Req: none

This senior level course focuses on solving design problems in mechanical engineering. Various design projects are proposed and sponsored by faculty and local industry. These projects typically combine various aspects of manufacturing engineering, industrial engineering, thermal/fluid systems, and particle technologies. Students select a project and are assigned to a project team. Class lecture meetings consist of 1) a set of lectures on various aspects of design (the design process, reliability, safety, ethics, aesthetics, brainstorming sessions, oral presentations) and 2) project team meetings. The emphasis in the course is on open ended design, in which there is no unique path to solving a particular design problem.

**Class time:** 10% lecture, 90% design team meetings

**Workload:** 1 paper, 2 oral presentations

**Grade:** 30% written reports/papers, 40% in-class presentations, 30% project advisor evaluation

**Exam format:**

### IEOR 5351 ANALYSIS OF PRODUCTION PROCESSES

(Sec 1) prereq 5020, IT stu or grad...backgrd in all indus engr areas rec-3000, 5010, 5030, 5040, 4 cr

Instructor: BARNETT E

Dist Req: none

Objectives: 1) to apply current operation management principles and practices, such as JIT, TQM and GT to operating situations in manufacturing organizations; 2) to learn the broad range of issues related to the management of the work force; 3) to understand the management issues related to traditional and changing production, quality, and inventory control problems; 4) to provide you with the opportunity to work within a team and to practice oral and written technical presentation skills. This course achieves its objectives by reading and discussion of text material and current literature and by utilizing the technique of study and analysis of operational case studies. It is the responsibility of each student to read, study, analyze and develop recommendations for each assigned case according to the schedule, and to come to each class session prepared to participate actively in the case discussions during the class period. Students work in teams on the case studies. A different case is assigned for presentation and discussion during each class session. One team is assigned to make an oral presentation of the case while another assigned team submits a written report on the case.

**Class time:** 10% lecture, 60% discussion, 30% oral case presentations by students

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**Workload:** 20 pages of reading per week, 1 exam, 5 papers, 5 oral case presentations  
**Grade:** 30% final exam, 30% written reports/papers, 10% class participation, 30% oral case presentations  
**Exam format:** essay

## INTERDEPARTMENTAL STUDY

### ID 3925 LIFE/CAREER PLANNING

(Sec 1) Jour 3925; prereq CLA jr or sr or #, non-jour stu should reg for Jour 3925, 2 cr

Instructor: KLEIN S

Dist Req: none

The typical class size is less than 20 students. Evaluation criteria includes written reports/papers, in-class presentations, class participation, video-taped mock interview and an instructor appointment. The course is designed for CLA juniors and seniors preparing for the transition from the University. It is designed to assist students (CLA juniors and seniors), formulate post-graduation education, employment, and personal plans; and to develop an understanding of transitional issues.

**Class time:** 50% lecture, 50% discussion

**Workload:** 50 pages of reading per week, 3 papers, self-assessment packet and special projects

**Grade:** 20% written reports/papers, 20% special projects, 20% in-class presentations, 20% class participation, 20%

**Exam format:** no exams

## ITALIAN

### ITAL 1101 BEGINNING ITALIAN

(Sec 1-7) 5 cr

Instructor: STAFF

Dist Req: none

Introduction to the basic structures of grammar and vocabulary. Emphasis will be based on the four language skills (speaking, writing, listening, reading) as well as on Italian culture and society. Texts: "Pugo! An invitation to Italian" 3rd edition, G. Lazzarino. Laboratory manual to accompany "Pugo! An invitation to Italian" G. Lazzarino, G. Bellesio.

**Class time:** 100% laboratory, proficiency-oriented methods

**Workload:** 4 exams, 2 papers, laboratory tests

**Grade:** 15% mid-quarter exam(s), 20% final exam, 10% written reports/papers, 15% quizzes, 10% lab work, 20% class participation, 10% 2 oral interviews

**Exam format:** short essays, grammar, vocabulary, reading exercises

### ITAL 1106 INTERMEDIATE ITALIAN

(Sec 1) prereq 1105, 5 cr

Instructor: STAFF

Dist Req: none

This course will examine some cultural aspects of modern Italy and will analyze the historical events of Italy during the Fascist dictatorship and the Second World War, with particular emphasis on the Resistance. A period of time will also be dedicated to grammar instruction and written activities. Texts: Da Capo, "An

Italian Review Grammar" 3rd edition (G. Lazzarino, A. Mone). Photocopied material.

**Class time:** 40% lecture, 60% discussion, 7

**Workload:** 4 pages of reading per week, 2 exams

**Grade:** 15% mid-quarter exam(s), 25% final exam, 10% written reports/papers, 10% quizzes, 15% in-class presentations, 15% class participation, 10% oral interview

**Exam format:** essay, grammar

## JAPANESE

### JPN 3021 INTERMEDIATE JAPANESE

(Sec 1-4) prereq 1013, 5 cr

Instructor: STAFF

Dist Req: none

Introduction to further vocabulary and grammatical patterns beyond the elementary level, especially complex sentences. Development of intermediate skills in speaking, listening, reading, and writing Japanese. Kanji (Chinese characters) introduced with gradually increasing frequency. Class format is combination of grammar explanation (lecture) and actual practice in using the language (recitation). Use of English gradually reduced so that Japanese is used almost exclusively by the spring quarter.

**Class time:** 40% lecture, 60% language recitation sections

**Workload:** 10 pages of reading per week, 2 exams, weekly written assignments and quizzes; oral interviews quarterly

**Grade:** 15% mid-quarter exam(s), 15% final exam, 20% quizzes, 20% class participation, 20% problem solving, 10% oral interview

**Exam format:** reading and listening comprehension; short answer questions in Japanese; Kanji (chinese characters)

### JPN 3031 THIRD YEAR JAPANESE

(Sec 1-2) prereq 3023, 5 cr

Instructor: STAFF

Dist Req: none

Improvement of reading skills, with emphasis on increased ability to recognize and write Kanji (Chinese characters) and to comprehend complex sentence patterns. Class conducted in Japanese, with in-class practice and outside assignments designed to develop speaking, listening, reading, and writing skills at the upper intermediate level.

**Class time:** 50% lecture, 50% discussion

**Workload:** 20 pages of reading per week, 2 exams, weekly written assignments and quizzes; oral interviews quarterly

**Grade:** 15% mid-quarter exam(s), 15% final exam, 15% special projects, 15% quizzes, 20% class participation, 10% problem solving, 10% oral interview

**Exam format:**

### JPN 3051 ADVANCED JAPANESE CONVERSATION AND COMPOSITION

(Sec 1-2) §5051; prereq 3033 or #, 4 cr

Instructor: STAFF

Dist Req: none

Discussion in Japanese of topics relevant to modern Japanese society, centered around videotaped dramas from Japanese television. Compositions assigned in Japanese to foster increased

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sophistication in expressive power. Readings in Japanese at the advanced level, with continued emphasis on vocabulary acquisition and recognition/reproduction of Kanji (Chinese characters).

**Class time:** 20% lecture, 80% discussion

**Workload:** 30 pages of reading per week, 3 papers

**Grade:** 30% written reports/papers, 30% quizzes, 10% class participation, 30% problem solving

**Exam format:**

### JPN 5051 ADVANCED JAPANESE CONVERSATION AND COMPOSITION

(Sec 1) §3051; prereq 3033 or #, 4 cr

Instructor: STAFF

Dist Req: none

Identical to JPN 3051, but with increased number of written compositions. Intended for students at the graduate level.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

## JOURNALISM & MASS COMM

### JOUR 3003 PRODUCING MASS MEDIA MESSAGES

(Sec 1-8) prereq formal pre-jour prog filed, 1001, fr comp or exemption, Δ, 4 cr

Instructor: HUNTZICKER W

Dist Req: none

Reading and lab assignments are from Copies on Campus; 2 other texts are also required. This course provides an introduction to mass media writing, including advertising, public relations, and news for print and broadcast media. This is a preparatory course for Journalism majors. Be prepared to spend a lot of time on this course.

**Class time:** 67% lecture, 33% writing lab session

**Workload:** 100 pages of reading per week, 4 exams, 1 paper per week

**Grade:** 80% written reports/papers, 20% quizzes, written reports include lab work, quizzes include exams

**Exam format:** multiple choice, and short answer

### JOUR 3004 INFORMATION FOR MASS COMMUNICATION

(Sec 1) prereq jour maj or min status, 3003, Δ, 4 cr

Instructor: HANSEN K

Dist Req: none

The course introduces the concept of the search strategy as it applies to mass communication. The course is concerned with the process of information gathering, evaluation and use. The strategies, techniques and resources discussed apply to all types of mass communication message production, and to work such as term paper and project production in other academic classes. A case study format is used to study the information process in depth. The course requires a text, a readings packet and an assignment book. Coursework is graded on a point basis by teaching assistants. The course is required of all majors and is a prerequisite to any major

coursework in the school.

**Class time:** 85% lecture, 10% discussion, 5% computer assisted instruction

**Workload:** 50 pages of reading per week, 2 exams, 1 major project, 7 assignments

**Grade:** 17% mid-quarter exam(s), 17% final exam, 33% written reports/papers, 33% special projects

**Exam format:** short answer and essay

### JOUR 3007 THE MEDIA IN AMERICAN HISTORY AND LAW: CASE STUDIES

(Sec 1) prereq jour maj or min status, 3004, or §3004, Δ, 4 cr

Instructor: DICKEN-GARCIA H

Dist Req: none

Giving special attention to legal and ethical issues, this course examines the media in the socio-economic-political-technological context of a specific historical period. The aim is to give students an opportunity for in-depth study of the press of a given era. This offering focuses on the late 19th and early 20th centuries, encompassing Reconstruction, the Gilded Age, and the Progressive Movement. Texts: Kathleen Brade "Ida Tarbell: Portrait of a Muckraker", 1989; Marion Marzolf "Civilizing Voices: American Press Criticism 1880-1950" 1991; Lincoln Steffens "The Autobiography of Lincoln Steffens" Vol 2, 1931.

**Class time:** 80% lecture, 20% discussion, slide lectures make up approximately one third to half the lectures

**Workload:** 200 pages of reading per week, 2 exams, 1 paper

**Grade:** 30% mid-quarter exam(s), 40% final exam, 30% written reports/papers

**Exam format:** essay

### JOUR 3101 REPORTING

(Sec 1) prereq jour maj status, 3004, pass 40 wpm keybrd test with 6 or fewer errors, Δ, 4 cr

Instructor: HUNTZICKER W

Dist Req: none

Students will report, write, and edit news stories. They are strongly encouraged to find stories on their own initiative, to be printed in community newspapers or in campus publications.

**Class time:** 17% lecture, 33% discussion, 50% laboratory

**Workload:** 50 pages of reading per week, 1 exam, 1 story/week, some quizzes

**Grade:** 90% written reports/papers, 10% quizzes

**Exam format:** writing and editing assignments

### JOUR 3451 TELEVISION AND RADIO NEWS

(Sec 1) prereq jour maj status, 3004, 3101, Δ, 4 cr

Instructor: FANG I

Dist Req: none

Broadcast news reporting, writing, videotape shooting and editing, on-air delivery, newscast production. Students present a weekly 30-minute TV broadcast of University news and sports over Metro Cable channel 6 Thurs 8-8:30. 4 hours weekly lecture and hands on practice, 4 hours of newscast preparation, about 8 hours of covering and producing television news stories. Students interested in radio careers substitute work at WMMR for video production.

**Class time:** 30% lecture, 30% demonstration, 40% practice

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**Workload:** 1 exam, shooting, editing, reporting, writing, production

**Grade:** grade based on individual work and one exam

**Exam format:** preparation of news summary, current events quiz

### JOUR 3745 MASS MEDIA AND POPULAR CULTURE

(Sec 1) open to non-jour maj; jour maj must have crse appr on prog plan; pre-jour shld not enroll, 4 cr

Instructor: GRIFFIN M

Dist Req: none

Course designed to introduce students (not necessarily Journalism or Mass Communication majors) to issues pertaining to the role of mass media in American culture and daily life. In modern, post-industrial society our lives are permeated by the images, appeals, reports and narratives of news, entertainment, "info-tainment," and advertising. Television, radio, movies, newspapers, magazines, billboards, posters and books create a ubiquitous mass marketed discourse that we often refer to as "popular culture." We will examine the historical concept of "mass culture" as it emerged alongside 20th century mass media and degree to which the concept "mass culture" is still applicable to study of mass communication. In conjunction with this issue we will pay particular attention to ways in which media translate and represent culture, ethnicity, race and gender. Students will analyze ways in which media practice defines "cultural other", and by extension all of us. There will be class lecture presentations; films, videos, and other samples of mass media; and class discussion of these materials. We will read a variety of articles on issues of cultural representation, concept of "mass culture" and role played by media in modern life.

**Class time:** 40% lecture, 30% discussion, 30% films and videotapes; media examples

**Workload:** 50 pages of reading per week, 2 papers, papers are short ones

**Grade:** 80% written reports/papers, 20% class participation

**Exam format:**

### JOUR 3925 LIFE CAREER PLANNING

(Sec 1) §ID 3925; open to non-jour maj; pre-jour and jour maj should reg for ID 3925; prereq cla jr or sr or #, 2 cr

Instructor: KLEIN S

Dist Req: none

The course is designed to assist juniors and seniors to formulate post-graduation plans by undergoing a self-awareness process, including interest identification, skills identification, values clarification, and personality trait identification. Students are then able to systematically explore the world of work in order to identify appropriate occupations, and potential employers. Students will learn how to write an effective resume, to conduct a pro-active job search, and to interview. Issues related to managing one's career and developing strategies for coping with life's transitions are also discussed. Students are strongly encouraged to participate in class discussion and group exercises. There are extra fees associated with the class for assessment of approximately \$10.

**Class time:** 40% lecture, 40% discussion, 20% small group work

**Workload:** 20 pages of reading per week, 2 papers, resume/cover letter; mock interview

**Grade:** 50% written reports/papers, 40% special projects, 10% class participation

**Exam format:**

### JOUR 5541 MASS COMMUNICATION AND PUBLIC HEALTH

(Sec 1) §PubH 5394; prereq 12 cr in soc/bhv sci, maj/min grad status, 3004, Δ for jour stu; #, Δ for PhD, MS stu in PubH and epidemiology, 3 cr

Instructor: FINNEGAN J

Dist Req: none

This course is designed to provide students in Public Health and graduate students in Epidemiology and Journalism and Mass Communication with an overview of theory and research into the role of mass media as they affect the public's health behavior. The role of mass media in public health is examined both as a product of everyday interaction with media and their planned use to accomplish particular public health goals. Research examined looks both at planned and unplanned effects of mass media in a variety of health situations representing a range of public health topical concerns.

**Class time:** 25% lecture, 75% discussion

**Workload:** 35 pages of reading per week, 1 exam, 1 paper

**Grade:** 25% final exam, 45% written reports/papers, 10% in-class presentations, 20% class participation

**Exam format:** take-home essay

### JOUR 5606 LITERARY ASPECTS OF JOURNALISM

(Sec 1) prereq jour maj or min status, 3004, #, Δ, 4 cr

Instructor: ROBERTS N

Dist Req: none

This is a graduate-level course that studies the literary aspects of journalism as exemplified in, and influenced by, works of English and U.S. writers, past and present. These may include: Joseph Addison, Richard Steele, Daniel Defoe, Jonathan Swift, Charles Lamb, William Hazlitt, Samuel Clemens, Stephen Crane, Ambrose Bierce, H.L. Mencken, Ernest Hemingway, Janet Flanner, John Steinbeck, E.B. White, Dorothy Parker, Lillian Ross, Rebecca West, John Hersey, James Agee, Dorothy Day, Meridel LeSueur, Lillian Hellman, James Baldwin, Joan Didion, Gloria Steinem, Truman Capote, Carol Bly, Lois Phillips Hudson, Annie Dillard, Alice Walker, and others. The course takes a broad perspective, tracing the history of creative nonfiction (which includes not only literary journalism, but the essay as well as autobiographical writing such as the memoir). The course explores such questions as: What is the relationship between journalism and literature? How has each influenced the other? How has this relationship figured in the history of mass communication and in the development of U.S. Journalism? The course presents opportunities both to read and analyze examples of creative nonfiction and to create your own.

**Class time:** 30% lecture, 50% discussion, 20% critiques of student writing

**Workload:** 200 pages of reading per week, 1 exam, 5 papers

**Grade:** 40% final exam, 40% written reports/papers, 20% class participation

**Exam format:** essay

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**JOUR 5825 WORLD COMMUNICATION SYSTEMS**

(Sec 1) prereq jour maj or min status, 3004, A, 4 cr

Instructor: CHANG T

Dist Req: (CSOM: C)

This course is designed to survey various systems of mass communication, particularly the press and TV in the world, with a special focus on some select countries of major significance. It will examine and compare the spirit and practice of media systems in relation to political, economic, and cultural factors of countries involved. The first part of the course will cover a variety of theoretical perspectives regarding the developments and structure of mass media systems and their implications for interactions between and among different systems as well as consequences for int'l understanding and cooperation. The second part will look at policies and operations of mass media in Africa, Asia, Latin America, and Middle East. The third part will discuss evolution and transition of mass media systems at both national and int'l level. No text required. Course format is lectures (including guest lectures), video presentations, and discussions if class desires. Final not cumulative.

**Class time:** 70% lecture, 30% discussion**Workload:** 60 pages of reading per week, 2 exams, 1 paper**Grade:** 30% mid-quarter exam(s), 35% final exam, 3% written reports/papers**Exam format:** short answer and brief essay questions**LATIN****LAT 1111H HONORS COURSE: BEGINNING LATIN**

(Sec 1) prereq regis in honors division or high ability as indicated by college entrance records, 5 cr

Instructor: NICHOLSON O

Dist Req: none

Learn Latin fast. It opens up a range of prose and poetry of real depth and beauty; you could read it in translation but don't forget Robert Frost defined poetry as what gets lost in the translation. At the end of this two-quarter sequence you will be reading the anguished poems of Catullus, a witty young man agonizingly in love in the first century B.C. You will also be well placed for further study that will enable you to read about the history of the Roman world, so different from our own but in so many ways the ancestor of it, as the Romans wrote about it, not as it is interpreted by modern historians. To achieve this the class moves fast. The only way to get inside a language is to use it. You will find (we hope) that hard work can be fun. You will also understand the nuts-and-bolts of how a language works; no language has been so long subjected to the scrutiny of grammarians as Latin has. Your study of Latin will give you a basis not just for the study of other Romance languages (Italian, Spanish, Portuguese, French, Romanian etc.) but for the study of any language. The man in Moliere's play was amazed to find that all his life he had been writing prose. Come and find out that all your life you have been using language!

**Class time:** 100% lecture and discussion**Workload:** 2 exams, weekly tests**Grade:****Exam format:** translations of English into Latin, and to a lesser extent Latin into English. Grammatical exercises.**LAT 3051 ACCELERATED BEGINNING LATIN**

(Sec 1) 3051-3052%, §1101, 1102, 1103, 1104, 5 cr

Instructor: NICHOLSON O

Dist Req: none

Learn Latin fast. It opens up a range of prose and poetry of real depth and beauty; you could read it in translation but don't forget Robert Frost defined poetry as what gets lost in the translation. At the end of this two-quarter sequence you will be reading the anguished poems of Catullus, a witty young man agonizingly in love in the first century B.C. You will also be well placed for further study that will enable you to read about the history of the Roman world, so different from our own but in so many ways the ancestor of it, as the Romans wrote about it, not as it is interpreted by modern historians. To achieve this the class moves fast. The only way to get inside a language is to use it. You will find (we hope) that hard work can be fun. You will also understand the nuts-and-bolts of how a language works; no language has been so long subjected to the scrutiny of grammarians as Latin has. Your study of Latin will give you a basis not just for the study of other Romance languages (Italian, Spanish, Portuguese, French, Romanian etc.) but for the study of any language. The man in Moliere's play was amazed to find that all his life he had been writing prose. Come and find out that all your life you have been using language!

**Class time:** 100% lecture and discussion**Workload:** 2 exams, weekly tests**Grade:****Exam format:** translations of English into Latin, and to a lesser extent Latin into English. Grammatical exercises.**LATIN AMERICAN STUDIES****LAS 3131 INTRODUCTION TO LATIN AMERICAN STUDIES**

(Sec 1) 4 cr

Instructor: STAFF

Dist Req: (CLA: C) (IT: C) (CSOM: C)

This is an introductory, multi-disciplinary survey of Latin America. It is not a topics course. The intent of the course is to introduce students to a wide variety of perspectives from and about Latin America, drawing on material from history, literature, anthropology, women's studies, political science and sociology, etc. Students will read a novel, an historical monograph, an ethnography/biography and a collection of articles with an emphasis on political science and sociology. In addition, guest speakers will be asked to address contemporary issues. Films and videos will be used to enhance ethnographic and cultural perspectives. Lectures will be organized to provide an historical context for the various topics. Students will write two in-class essay exams and a ten page paper on a topic of their choice.

**Class time:** 60% lecture, 20% discussion, 20% videos; guest lecturers; films**Workload:** 100 pages of reading per week, 2 exams, 1 paper**Grade:** 30% mid-quarter exam(s), 40% final exam, 30% written reports/papers**Exam format:** essay

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## LEARN & ACADEMIC SKILLS

### LASK 1001 BECOMING A MASTER STUDENT

(Sec 1-10) not for CLA degree credit, 2 cr

Instructor: STAFF

Dist Req: none

This course will help you become a more efficient and effective student by helping you master the process of learning. Participating in the Becoming A Master Student course gives you a chance to focus on such topics as: 1) developing useful study habits so you can maximize your learning in a study session; 2) improving reading comprehension so you can better understand and remember what you read; 3) managing your time so you can use your most valuable resource to your advantage; 4) improving memory skills to aid you in producing the right information at the right time; and 5) planning exam strategies for what to do before, during and after a test to show what you know. This course will provide the opportunity for you to learn, practice and adopt methods which will help you to be a more successful student.

**Class time:** 30% lecture, 30% discussion, 40% in-class activities

**Workload:** 20 pages of reading per week, 2 papers, weekly chapter quizzes

**Grade:** 15% written reports/papers, 25% special projects, 25% quizzes, 35% class participation

**Exam format:** weekly quizzes are generally short answer or brief essays

## LINGUISTICS

### LING 1005 LANGUAGE AND SOCIETY

(Sec 1) 4 cr

Instructor: DOWNING B

Dist Req: (CLA: C) (IT: C) (CSOM: C)

The role of language in human social interaction; linguistic indicators of social status and attitudes; language and sex roles; linguistic ecology; language planning for multilingual communities; implications for educational and public policy. These topics are introduced through lectures and discussion in class and readings from the textbook (Peter Trudgill's "Sociolinguistics: An Introduction to Language and Society") plus a small number of assigned articles. Students have the opportunity to relate this material to their own experience and viewpoints through small group discussions (for which class time is set aside) leading to two group reports and through individual reports on two topics drawn from a short list. These topics include sexist language, the social meanings attached to the names we use for family, friends, and others, and the maintenance and loss of immigrant languages. Individuals can opt to partake in one or two panel discussions on such topics as the value of bilingual education and the establishment of English as the official language of the U.S.

**Class time:** 70% lecture, 10% discussion, 20% student work groups

**Workload:** 30 pages of reading per week, 4 exams, 2 group assignments, 2 individual assignments

**Grade:** 30% final exam, 40% written reports/papers, 30% quizzes, extra credit activities available

**Exam format:** multiple choice, short answers, short essay

### LING 3001 INTRODUCTION TO LINGUISTICS

(Sec 1-4) §5001, 5 cr

Instructor: KAC M

Dist Req: (CLA: A) (IT: A) (CSOM: A)

This course introduces the concepts and techniques employed in the analysis of linguistic structure in its two main aspects: phonological (having to do with the mechanisms of speech and with the way in which information is conveyed by the speech signal) and grammatical (having to do with the way in which larger meaningful expressions are built up from smaller ones). There is also a unit devoted to historical-comparative linguistics, including the origins and development of the Indo-European language family. Considerable emphasis is placed in this course on formalization-the process of reducing intuitive concepts to a precise, rigorous representation. The study of such representations of linguistic concepts (called generative grammars) is a major research area in the discipline. The approach taken is one of active learning, in which students are called upon to do linguistic analysis themselves via regular problem solving assignments in which the student, given unanalyzed data from a language, must describe what the data reveal about the structure of the language in its relevant aspects. Data will be drawn from a wide variety of languages and language families, many of which will be unfamiliar to most of the students in the course.

**Class time:** 75% lecture, 25% discussion

**Workload:** 30 pages of reading per week, 3 exams, problem solving assignments

**Grade:** 66% mid-quarter exam(s), 33% final exam

**Exam format:** problems

### LING 3301 PHONETICS

(Sec 1) §5301, 5003; prereq 3001 or ¶ or #, 5 cr

Instructor: STEMBERGER J

Dist Req: none

The course has two main goals: 1) to provide the student with basic information about the phonetics of human language, including transcription, production, and perception, and 2) to teach the student the necessary skills to be able to transcribe words in any human language phonetically. The content portion includes the full set of sounds used in all human languages (as catalogued in the IPA), along with how they are made (in terms of both anatomy and physics), the physics of sound, and speech perception. The skills portion involves practice in transcribing and producing exotic speech sounds. No previous background in physics or anatomy is assumed, and the course is non-mathematical in nature. Teaching is lecture format 4 days a week and one day of transcription and production practice. There are 8 quizzes that assess the student's ability to transcribe non-English speech sounds. Textbooks are Ladefoged's "Course in Phonetics" and Fry's "The Physics of Speech", with additional handouts on speech perception.

**Class time:** 80% lecture, 20% laboratory

**Workload:** 30 pages of reading per week, 2 exams, 8 quizzes

**Grade:** 30% mid-quarter exam(s), 35% final exam, 35% quizzes

**Exam format:** short answer, essay

### LING 5011 MATHEMATICAL LINGUISTICS

(Sec 1) prereq linguistics maj or #, 4 cr

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**Instructor:** HUTCHINSON L

**Dist Req:** none

This course presumes no previous work in mathematics. It is self-contained, and begins at the beginning. It is part of a three quarter sequence. LING 5011 is devoted to formal logic, although some work on elementary set theory and the nature of axiomatic systems is covered. The propositional and predicate calculi are covered, as is tense logic, modal logics, and multi-valued logic. Emphasis is placed on why these topics are important and why they have been pursued the way they have been. The textbook, 'Mathematical Methods in Linguistics', by Barbara Partee, Alice Ter Meulen, and Robert Wall, is very well written and also presumes no previous mathematics training or course work.

**Class time:** 90% lecture, 10% discussion

**Workload:** 15 pages of reading per week, 2 exams, weekly problem sets

**Grade:** 40% mid-quarter exam(s), 40% final exam, 20% problem solving

**Exam format:** Exams are problem solving exams. They are take-home exams, due one week after they are handed out.

### LING 5301 PHONETICS

(Sec 1) §3301, 5003; prereq 3001 or 5001 or ¶ or #, 5 cr

**Instructor:** STEMBERGER J

**Dist Req:** none

The course has two main goals: 1) to provide the student with basic information about the phonetics of human language, including transcription, production, and perception, and 2) to teach the student the necessary skills to be able to transcribe words in any human language phonetically. The content portion includes the full set of sounds used in all human languages (as catalogued in the IPA), along with how they are made (in terms of both anatomy and physics), the physics of sound, and speech perception. The skills portion involves practice in transcribing and producing exotic speech sounds. No previous background in physics or anatomy is assumed, and the course is non-mathematical in nature. Teaching is lecture format 4 days a week and one day of transcription and production practice. There are 8 quizzes that assess the student's ability to transcribe non-English speech sounds. Textbooks are Ladefoged's "Course in Phonetics" and Fry's "The Physics of Speech", with additional handouts on speech perception.

**Class time:** 80% lecture, 20% laboratory

**Workload:** 30 pages of reading per week, 2 exams, 8 quizzes

**Grade:** 30% mid-quarter exam(s), 35% final exam, 35% quizzes

**Exam format:** short answer, essay

### LING 5721 ENGLISH AS A SECOND LANGUAGE: METHODS

(Sec 1) prereq 3001 or 5001 or #, 4 cr

**Instructor:** COHEN A

**Dist Req:** none

The course is intended to cover key topics and issues of concern for prospective and practicing teachers of English as a second language. After considering basic concepts and perspectives in ESL, we will focus on the individual skill areas of listening, speaking, pronunciation, reading, writing, grammar, and vocabulary. We will also look at lesson planning, testing, teaching and learning styles and the role of culture. The class sessions will be divided between lecture/discussion sessions and small group

exercises.

**Class time:** 25% lecture, 10% closed-circuit TV, 45% discussion, 20% student presentations

**Workload:** 50 pages of reading per week, 2 exams, 1 report of ESL classroom observations

**Grade:** 30% mid-quarter exam(s), 40% final exam, 30% written reports/papers

**Exam format:** short-answers, essays

## MARKETING

### MKTG 3020 MARKETING OPERATIONS MANAGEMENT

(Sec 1) prereq 3010, 4 cr

**Instructor:** RAO A

**Dist Req:** none

This class deals with the planning and execution of marketing strategy. A principal focus of the class will be the establishment and maintenance of competitive advantage. Students are expected to be comfortable with basic marketing terms and concepts covered in introductory courses (e.g., 3000). The class will primarily involve a learning by doing approach. The degree of emphasis on case work necessitates extensive preparation for class; being prepared for class and demonstrating that preparation is crucial.

**Class time:** 50% lecture, 50% discussion

**Workload:** 100 pages of reading per week, 2 papers

**Grade:** 50% written reports/papers, 35% special projects, 15% class participation

**Exam format:**

## LOGISTICS MANAGEMENT

### LM 3000 INTRODUCTION TO LOGISTICS MANAGEMENT

(Sec 1) prereq Econ 1101 or equiv, 4 cr

**Instructor:** HARPER D

**Dist Req:** none

Logistics management deals with that set of problems associated with the flow of physical goods from acquisition of raw materials to eventual consumption of finished goods. Logistics managers are typically charged with the responsibility of managing cost and service trade-offs between two or more decision areas, for example, balancing transportation and inventory costs. Decision areas included in logistics management are transportation, inventory levels, location of physical facilities, warehousing, scheduling, information systems, and customer service. Note that, within a firm, some of these decision areas are associated with different functions such as marketing and operations management. Thus, logistics management is an integrative problem-solving activity with the objective of efficient product flow. The purpose of this course is to introduce the area of logistics (sometimes referred to as distribution) as a field of managerial responsibility and to identify the linkages between logistics and other managerial disciplines, in particular marketing and operations management.

**Class time:** 40% lecture, 35% discussion, 25% analysis of case problems

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**Workload:** 25 pages of reading per week, 2 exams, 2 papers, simulation exercise about 1-1/2 hours per week  
**Grade:** 35% mid-quarter exam(s), 35% final exam, 10% written reports/papers, 10% special projects, 10% class participation  
**Exam format:** essay

## MATERIALS SCIENCE

### MATS 5112 CERAMICS

(Sec 1) prereq upper division IT, 5011, 5101, 5102 or #, 4 cr

Instructor: FRANCIS L

Dist Req: none

The first part of the course will cover materials fundamentals (structure, bonding, phase equilibria, microstructure) as they apply to crystalline and non-crystalline ceramics. The second part will be devoted to the properties of ceramics: thermal, mechanical, and electrical. Weekly two hour lab sessions will be arranged. Experiments include processing and electrical properties of dielectric ceramics, slip-casting of clay and alumina, and mechanical properties of glasses. Off campus students will be required to complete an alternative project. Text: W. D. Kingery, H. K. Bowen and D. R. Uhlmann, "Introduction to Ceramics" 2nd edition.

**Class time:** 67% lecture, 33% laboratory

**Workload:** 20 pages of reading per week, 3 exams, lab reports - 1 long, 3 short

**Grade:** 30% mid-quarter exam(s), 35% final exam, 25% lab work, 10% problem solving

**Exam format:** short answer, essay, numerical problems

### MATS 5450 CORROSION AND ELECTROCHEMISTRY OF CORROSION

(Sec 1) prereq upper division IT, 5101 or #, 4 cr

Instructor: SHORES D

Dist Req: none

This is an overview of high temperature oxidation processes. The text will be followed approximately, but with extensive supplements from the literature. There will be homework problems, class discussion, a term paper and probably two exams. I would like to include some laboratory experiments, if possible. Undergraduates may earn 1 design credit. The following topics will be discussed: thermodynamic considerations (phase stability diagrams); solid state transport (point defect equilibria in binary oxides, doping, solid state diffusion, Wagnerian oxidation theory); examples of oxidation processes in oxygen (pure metals, alloys - steady state and transient processes, effects of stress); examples of oxidation in aggressive environments (mixed gases, eg. oxygen and sulfur, hot corrosion).

**Class time:** 75% lecture, 20% discussion, 5% laboratory

**Workload:** 20 pages of reading per week, 2 exams, 1 paper, homework problems

**Grade:** 20% mid-quarter exam(s), 30% written reports/papers, 10% class participation, 20% problem solving

**Exam format:** problem solving

## MATHEMATICS

### MATH 1001 EXCURSIONS IN MATHEMATICS

(Sec 1-3) prereq 3 yrs high schl math, placement exam or GC 0631 with grade of C or better, 4 cr

Instructor: STAFF

Dist Req: (CLA: A) (CSOM: A)

Text: "Excursions in Modern Mathematics" by Peter Tannenbaum and Robert Arnold, together with a newspaper supplement to be obtained during the course. This course is primarily for those planning to take no subsequent mathematics course since it does not serve as a prerequisite for any other mathematics course; is only for those who are able to do second-year high school algebra problems - a placement test is available in VinH 4 for those who have not recently taken one; and if it does fill a group A requirement and (despite what the 1992-1994 CLA Bulletin says) does fill the formal language requirement within group A.

**Class time:** 60% lecture, 40% discussion

**Workload:** 25 pages of reading per week, 5 exams, 9 problem sets  
**Grade:** 42% mid-quarter exam(s), 44% final exam, 14% problem solving

**Exam format:** no multiple choice; problems written out

### MATH 1008 TRIGONOMETRY

(Sec 1-3) §1201; prereq plane geometry, 2 yrs hs algebra or ¶1111, grade of C or better in GC 0631, 4 cr

Instructor: STAFF

Dist Req: none

This course (in conjunction with Math 1031 College Algebra and Probability) provides prerequisite knowledge for the standard calculus sequence: Math 1251, 1252 and 1261. Text: "Trigonometry", 2nd edition, by Charles P. McKeague.

**Class time:** 100% lecture

**Workload:** 3 exams, quizzes, homework

**Grade:**

**Exam format:** multiple choice

### MATH 1031 COLLEGE ALGEBRA AND PROBABILITY

(Sec 1-19) §1051, 1151, 1111, 1201; prereq 3 yrs hi sch math, placement exam or GC 0631 with C or bet, 4 cr

Instructor: STAFF

Dist Req: (CLA: A) (CSOM: A)

Text: "College Algebra", 2nd edition, by Kaufmann

**Class time:**

**Workload:** 4 exams

**Grade:** 45% mid-quarter exam(s), 40% final exam, 15% quizzes

**Exam format:**

### MATH 1051 PRECALCULUS I

(Sec 1-12) §1031, 1111, 1201, 1008, 1151; prereq 3 yrs hi sch math, placemnt exam or GC 0631 C or bet, 4 cr

Instructor: STAFF

Dist Req: none

Text: David Cohen, "Precalculus", 3rd edition.

**Class time:**

**Workload:** 4 exams, homework assignments

**Grade:**

*The distribution requirement (Dist Req) information is only valid for CLA, IT and CSOM and for groups A, B, C and D.*

*Look for UCIP on the University Computer Network via Gopher*

**Exam format:**

### **MATH 1131 FINITE MATHEMATICS**

(Sec 1-3) prereq 3 1/2 yrs high school math or grade of C or better in 1111 or 1181, pre bus or soc and behav sci students, 5 cr

Instructor: STAFF

Dist Req: (CLA: A) (CSOM: A)

Text: S. T. Tan, "Applied Finite Mathematics", 3rd edition. Chapters, in order to be covered: ch. 5. Mathematics of Finance; ch. 6. Sets and Counting; ch. 7. Probability; ch. 8. Probability Distributions and Statistics; ch. 1. Straight Lines and Linear Functions; ch. 2. Systems of Linear Equations and Matrices; ch. 3. Linear Programming: a Geometric Approach; ch. 9. Markov Chains and the Theory of Games.

**Class time:** 60% lecture, 30% discussion, 10% exams

**Workload:** 30 pages of reading per week, 3 exams

**Grade:** 40% mid-quarter exam(s), 50% final exam, 10% quizzes

**Exam format:** problems

### **MATH 1142 SHORT CALCULUS**

(Sec 1-8) §1211, 1411H; prereq 3 1/2 yrs hs math or grade of C or better in 1111 or 1181 or 1201, 5 cr

Instructor: STAFF

Dist Req: (CLA: A) (CSOM: A)

**Class time:** 100% lecture

**Workload:** 40 pages of reading per week, 2 exams, 6-15 minute quizzes

**Grade:** 40% mid-quarter exam(s), 40% final exam, 20% quizzes

**Exam format:** problems to solve; some multiple choice on the final

### **MATH 1151 PRECALCULUS II**

(Sec 1-12) §1111, 1201, 1008; prereq 3 1/2 yrs hi sch math, ploomnt exam or 1051 grade of C or better, 4 cr

Instructor: STAFF

Dist Req: (CLA: A) (CSOM: A)

"Precalculus" 3rd edition, David Cohen

**Class time:**

**Workload:** 4 exams, homework

**Grade:** 45% mid-quarter exam(s), 40% final exam, 15% quizzes

**Exam format:**

### **MATH 1251 ONE-VARIABLE DIFFERENTIAL AND INTEGRAL CALCULUS I**

(Sec 1-36) §1451H, 1211, 1411H; prereq 4 yrs high schl math incl trig, or C grade or better in 1201 or 1008, 1111, or equiv, 4 cr

Instructor: STAFF

Dist Req: (CLA: A) (CSOM: A)

Text: "Single Variable Calculus" 2nd edition, by James Stewart

**Class time:** 90% lecture, 10% discussion

**Workload:** 25 pages of reading per week, 4 exams, homework of 4-5 hours a week

**Grade:** 45% mid-quarter exam(s), 40% final exam, 15% quizzes

**Exam format:** essay

### **MATH 1252 ONE-VARIABLE DIFFERENTIAL AND INTEGRAL CALCULUS II**

(Sec 1-15) §1452H, 1221, 1421H; prereq C grade or better in 1251, 4 cr

Instructor: STAFF

Dist Req: (CLA: A) (CSOM: A)

Text: James Stewart, "Single Variable Calculus" 2nd edition

**Class time:** 100% lecture

**Workload:** 25 pages of reading per week, 3 exams, 8 quizzes

**Grade:** 40% mid-quarter exam(s), 40% final exam, 20% quizzes

**Exam format:** problems to be solved; some multiple choice on the final

### **MATH 1261 THE ALGEBRA AND GEOMETRY OF EUCLIDEAN SPACE**

(Sec 1-17) §1241, 1553H, 3142, 3551H; prereq 1251 or 1211, 4 cr

Instructor: STAFF

Dist Req: (CLA: A) (CSOM: A)

Text: R. E. Williamson and H. F. Trotter, "Multivariable Mathematics" 2nd edition; Supplementary notes "Subspaces and Affine Spaces in Euclidean Spaces"

**Class time:** 70% lecture, 30% discussion

**Workload:** 4 exams

**Grade:** 50% mid-quarter exam(s), 50% final exam

**Exam format:**

### **MATH 1551H HONORS: ONE-VARIABLE DIFFERENTIAL AND INTEGRAL CALCULUS I**

(Sec 80-83) §1251, 1411H, 1211; prereq consent of IT Honors Office, 4 cr

Instructor: STAFF

Dist Req: (CLA: A) (CSOM: A)

**Class time:** some lecture, some discussion - portions vary

**Workload:** 3 exams, 5 projects

**Grade:** 20% mid-quarter exam(s), 40% final exam, 40% special projects

**Exam format:** problems to solve, theorems to state, definitions to state, reasons/methods to describe.

### **MATH 1552H HONORS: ONE-VARIABLE DIFFERENTIAL AND INTEGRAL CALCULUS II**

(Sec 80) §1252, 1421H, 1221; prereq 1551H with grade of C or better, consent of IT Honors Office, 4 cr

Instructor: STAFF

Dist Req: (CLA: A) (CSOM: A)

**Class time:** some lecture, some discussion - portions vary

**Workload:** 3 exams, 5 projects

**Grade:** 20% mid-quarter exam(s), 40% final exam, 40% special projects

**Exam format:** problems to solve, theorems to state, definitions to state, reasons/methods to describe.

### **MATH 3251 MULTIVARIABLE DIFFERENTIAL CALCULUS**

(Sec 5-8) §3211, 3311, 3521H, 3552H, 4 cr

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Instructor: MIRACLE C  
 Dist Req: none  
 Text: Williamson, "Multivariable Mathematics"  
 Class time: 60% lecture, 40% recitation Tuesday and Thursday  
 Workload: 4 exams, homework  
 Grade: 43% mid-quarter exam(s), 43% final exam, 14% homework  
 Exam format:

## MECHANICAL ENGINEERING

### ME 3301 THERMODYNAMICS

(Sec 3) prereq IT or ForP stu, Chem 1014 or Chem 1052 or Phys 1252, Math 3261 or equiv, 4 cr  
 Instructor: IBELE W !!Morse Alumni Teaching Award Winner!!  
 Dist Req: none  
 The principles of thermodynamics govern and elucidate all energy transformations. Though few in number they are cast in a general and powerful form in order to have the widest range of application. The course attempts to build a firm understanding of the basic principles, directed experiences in selecting the systems to which the principles are applied, and a rigorous, systematic methodology for solving problems. This includes the concept of energy in its various forms, the first law of thermodynamics (conservation of energy), the concept of entropy and the second law of thermodynamics, and the behavior of systems due to energy transfers. Because energy transfers and conversions are inherent to almost all facets of a technological society, knowledge of thermodynamics and the ability to apply its principles are essential for the professional practice of engineering. As the world's rising population encounters environmental limits, thermodynamics and its principles will be among the areas of knowledge essential in resolving a problem of growing urgency.  
 Class time: 60% lecture, 20% discussion, 20% problem/project work  
 Workload: 30 pages of reading per week, weekly homework, 3 quizzes, 7 group projects; minimum effort 2 hrs for each class hour  
 Grade: 45% final exam, 40% quizzes, 15% homework and project work  
 Exam format: problem solving, occasionally discussion question

### ME 3303 APPLIED THERMODYNAMICS

(Sec 1) §3305; prereq 3301 or equiv, upper division mech engr or aerospace engr maj, 4 cr  
 Instructor: IBELE W !!Morse Alumni Teaching Award Winner!!  
 Dist Req: none  
 The early material expands the thermodynamic domain to include mixtures, phase change psychrometrics, chemical reactions and thermodynamic equilibrium. Selected closed and open systems are analyzed from a First Law (energy) and Second Law (entropy) viewpoint. Some of the power systems subject to thermodynamic analysis include gas cycles (internal and external combustion) and vapor power cycles including the various modifications introduced in order to improve performance from both thermodynamic and practice standpoints. Reversed cycles are considered, illus-

trating the strategy by which end result (which require the investment of work) can be achieved by means of a multiplier effect minimizing the work requirements. Systems considered include vapor compression refrigeration cycles, heat pump cycles and absorption cooling. In both forward (power) and reverse (cooling/heating) cycles the modeling aspect of thermodynamic analysis is introduced and pursued.

Class time: 60% lecture, 40% 20% recitation, 20% problem/project work  
 Workload: 30 pages of reading per week, weekly homework, 3 quizzes, 7 group projects; minimum effort 2 hrs for each class hour  
 Grade: 45% final exam, 40% quizzes, 15% homework and project work  
 Exam format: problem solving, occasional discussion question

### ME 5254 DESIGN MORPHOLOGY WITH APPLICATIONS

(Sec 1-9) prereq completion of sequences 3201/3203/3205, 3303/5342 or #, upper div mech engr maj, 4 cr  
 Instructor: MANTELL S  
 Dist Req: none  
 This senior level course focuses on solving design problems in mechanical engineering. Various design projects are proposed and sponsored by faculty and local industry. These projects typically combine various aspects of manufacturing engineering, industrial engineering, thermal/fluid systems, and particle technologies. Students select a project and are assigned to a project team. Class lecture meetings consist of 1) a set of lectures on various aspects of design (the design process, reliability, safety, ethics, aesthetics, brainstorming sessions, oral presentations) and 2) project team meetings. The emphasis in the course is on open ended design, in which there is no unique path to solving a particular design problem.  
 Class time: 10% lecture, 90% design team meetings  
 Workload: 1 paper, 2 oral presentations  
 Grade: 30% written reports/papers, 40% in-class presentations, 30% project advisor evaluation  
 Exam format:

### ME 5255 ENGINEERING DESIGN PROJECT

(Sec 1) prereq 5254, upper division mech engr maj, 4 cr  
 Instructor: MANTELL S  
 Dist Req: none  
 This senior level course focuses on solving design problems in mechanical engineering. Various design projects are proposed and sponsored by faculty and local industry. These projects typically combine various aspects of manufacturing engineering, industrial engineering, thermal/fluid systems, and particle technologies. Students select a project and are assigned to a project team. Class lecture meetings consist of 1) a set of lectures on various aspects of design (the design process, reliability, safety, ethics, aesthetics, brainstorming sessions, oral presentations) and 2) project team meetings. The emphasis in the course is on open ended design, in which there is no unique path to solving a particular design problem.  
 Class time: 10% lecture, 90% design team meetings  
 Workload: 1 paper, 2 oral presentations

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*Look for UCIP on the University Computer Network via Gopher*

**Grade:** 30% written reports/papers, 40% in-class presentations, 30% project advisor evaluation

**Exam format:**

### ME 5285 CONTROL SYSTEMS LABORATORY

(Sec 1) prereq 5283 or equiv, IT or grad IT maj, 2 cr

Instructor: DONATH M

Dist Req: none

Experiments designed to illustrate and apply control theory to mechanical engineering systems. Measurement techniques, calibration, timing of controls, characterization of sensors and control circuits. In the past, students have worked on 2 control experiments; one in motion control and another in process control. Emphasis on all aspects involved in real-life control design and implementation including: dynamic modeling, controller design, analysis and simulation, hardware implementation and circuit analysis, sensor calibration, and data acquisition and processing.

**Class time:** 80% lecture, 20% demos, tours

**Workload:** 1 exam, groups of 2-4 students work together and prepare 2 technical reports

**Grade:** 40% final exam, 60% written reports/papers

**Exam format:** lab specific questions including engineering "word problems"

### ME 5330 HEAT TRANSFER LABORATORY

(Sec 1-4) prereq 5342, ME upper div, 2 cr

Instructor: PFENDER E

Dist Req: none

The senior heat transfer lab is a 2-credit course that gives you the opportunity to experience some of the heat transfer and flow phenomena that you discussed in ME5342. It meets for one lecture hour and for a 3-hour lab each week. Typically the labs have three to five persons each. Objectives: To experience heat transfer and develop a feel for the physics of the processes. To become acquainted with modern experimental instruments and techniques. To enjoy working with hardware.

**Class time:** 25% lecture, 75% laboratory

**Workload:** lab reports - a total of about 50 hours outside class/lab

**Grade:** 85% written reports/papers, 15% class participation

**Exam format:**

### ME 5342 HEAT TRANSFER

(Sec 1-2) prereq IT upper div or grad or ForP stu, 3301, CE 3400 or AEM 3200, 4 cr

Instructor: STAFF

Dist Req: none

Steady and unsteady conduction of heat. Convection heat transfer in boundary layer and duct flows; forced and free convection; condensation and boiling; heat exchangers. Heat transfer by thermal radiation; radiative properties of black bodies and real surfaces. Text: "Introduction to Heat Transfer" 2nd edition, Incropera. Topics: 1) analysis and design techniques involving steady state conduction heat transfer; 2) transient conduction heat transfer including numerical methods; 3) forced convection heat transfer or combines conduction/convection heat transfer; 4) free convection of mixed forced and free convection heat transfer; 5) heat exchanger design and analysis; 6) radiation heat transfer or mixed radiation/conduction heat transfer; 7) exams and final

exam review; 8) problem and review sessions.

**Class time:** 75% lecture, 25% discussion

**Workload:** 25 pages of reading per week, 3 exams

**Grade:** 30% mid-quarter exam(s), 40% final exam, 10% quizzes, 10% class participation, 10% problem solving

**Exam format:** thermal analysis problems

### ME 5342H HEAT TRANSFER

(Sec 1) §5342; prereq 3301, CE 3400 or AEM 3200, ME upper div honors stu, 4 cr

Instructor: STAFF

Dist Req: none

Steady and unsteady conduction of heat. Convection heat transfer in boundary layer and duct flows; forced and free convection; condensation and boiling; heat exchangers. Heat transfer by thermal radiation; radiative properties of black bodies and real surfaces. Text: "Introduction to Heat Transfer" 2nd edition, Incropera. Topics: 1) analysis and design techniques involving steady state conduction heat transfer; 2) transient conduction heat transfer including numerical methods; 3) forced convection heat transfer or combines conduction/convection heat transfer; 4) free convection of mixed forced and free convection heat transfer; 5) heat exchanger design and analysis; 6) radiation heat transfer or mixed radiation/conduction heat transfer; 7) exams and final exam review; 8) problem and review sessions.

**Class time:** 75% lecture, 25% discussion

**Workload:** 25 pages of reading per week, 3 exams

**Grade:** 30% mid-quarter exam(s), 40% final exam, 10% quizzes, 10% class participation, 10% problem solving

**Exam format:** thermal analysis problems

### ME 5343 INTRODUCTION TO THERMAL DESIGN

(Sec 1) prereq 5342, 5254 or equiv, upper division IT stu or grad, 4 cr

Instructor: BAR-COHEN A

Dist Req: none

Elements of thermal design. Development of design philosophy and governing relations for thermal configurations, including barriers and enclosures, longitudinal, radial and pin-fins, longitudinal fin arrays. Case studies from diverse thermal application areas, e.g., furnaces and ovens, HVAC systems, solar energy utilization, and electronic equipment. Goals: This course introduces the student to the tools and components of thermal design and provides a directed experience in thermal modeling of diverse elements. Topics: 1) thermal design morphology; 2) design of thermal enclosures for steady-state and transient behavior; 3) design of thermal sensors; 4) design and optimization of convective fins; 5) design of radiative fins; 6) augmentation of single and two-phase thermal transport; 7) tests and reviews.

**Class time:** 25% lecture, 50% discussion, 25% laboratory

**Workload:** 10 pages of reading per week, 2 exams, 6 case studies

**Grade:** 20% mid-quarter exam(s), 20% final exam, 10% class participation, 50% problem solving

**Exam format:** open book, engineering analysis and design

### ME 5351 COMPUTATIONAL HEAT TRANSFER

(Sec 1) prereq 5342, IT stu or grad, 4 cr

Instructor: PATANKAR S !!Morse Alumni Teaching Award

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**Winner!!**

**Dist Req:** none

The course deals with numerical solution of heat conduction and duct flow heat transfer. After the introduction of the basic solution method, a general computer program is presented. The main activity in the course consists of the adaptation of the program to solve a large variety of problems. The students are required to choose two independent problems and solve them by using the computer program. These projects can involve design optimization. The course emphasizes physical understanding rather than mathematical manipulation. Text: S.V. Patankar "Computation of Conduction and Duct Flow Heat Transfer" Innovative Research 1991.

**Class time:** 100% lecture

**Workload:** 20 pages of reading per week, 2 exams, 2 projects; home assignments 1/week

**Grade:** 20% mid-quarter exam(s), 40% final exam, 25% special projects, 15% problem solving

**Exam format:** The students are required to write parts of a computer program to solve the given physical problem(s).

**ME 5462 GAS TURBINES**

(Sec 1) prereq 3301, IT stu or grad, 4 cr

**Instructor:** MURPHY T

**Dist Req:** none

See IT bulletin for course description. Text - "Fundamentals of Gas Turbines" by Bathie.

**Class time:** 100% lecture

**Workload:** 30 pages of reading per week, 3 exams

**Grade:** 50% final exam, 50% quizzes

**Exam format:** problems to solve

**ME 5603 THERMAL ENVIRONMENTAL ENGINEERING**

(Sec 1) prereq 3303, 5342 or equiv, IT stu or grad, 4 cr

**Instructor:** KUEHN T

**Dist Req:** none

The purpose of this course is to discuss the engineering design guidelines and physical principles associated with the heating, ventilation, air conditioning and solar energy industries. Topics include psychrometrics, solar radiation, human thermal comfort, heat transfer through buildings and estimates of fuel required for space heating. The methodology follows recommended practice as described by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) and applicable building codes.

**Class time:** 80% lecture, 20% discussion

**Workload:** 2 exams, weekly homework assignments

**Grade:** 40% mid-quarter exam(s), 35% final exam, 25% problem solving

**Exam format:** solution of engineering problems

**ME 5609 AIR POLLUTION**

(Sec 1) prereq IT upper div or grad stu, 4 cr

**Instructor:** MCMURRY P

**Dist Req:** none

This course along with PubH 5181 are team taught with common lectures by Professors McMurry and Swackhamer. Students are assigned different homework, however, and different exams. The

courses address the physical and chemical behavior of air pollutants. Topics that are covered include introductory material, gas phase chemistry (including photochemistry and free radical chain reactions), toxic air pollutants, atmospheric aerosols, visibility, source-receptor relationships, meteorology, and special topics on air pollution effects including forest decline, risk assessment, ozone health effects, global warming, stratospheric ozone depletion, etc. A highlight of the course is the poster session held at the end of the quarter where students present the results of their term paper research to the class, and are asked to select the best poster.

**Class time:** 80% lecture, 20% discussion

**Workload:** 25 pages of reading per week, 3 exams, 1 paper, weekly homework assignments

**Grade:** 60% mid-quarter exam(s), 15% written reports/papers, 15% problem solving, 10% poster presentation

**Exam format:** problems, essay

**ME 5630 THERMAL ENVIRONMENTAL ENGINEERING SENIOR LABORATORY**

(Sec 1-3) prereq 3701, 3702, 5603; formerly 5703-4-5, Lab sections E-1, E-2, 2 cr

**Instructor(s):** KUEHN T, RAMSEY J

**Dist Req:** none

The purpose of this course is to allow students to operate various pieces of equipment used in the heating, refrigerating and solar energy industries and to take the data necessary to evaluate the performance of this equipment. Students operate a forced air ventilating system that contains a variable speed fan, heat exchanger, and air conditioning cooling coil. A walk-in cooler refrigeration system and a liquid heating flat plate solar collector system are also studied. Students are expected to develop report writing skills by writing their laboratory results using a technical report format.

**Class time:** 30% lecture, 70% laboratory

**Workload:** one formal report and four informal reports

**Grade:** 85% written reports/papers, 5% quizzes, 10% class participation

**Exam format:** no exams; only 1-2 short quizzes

**MUSIC****MUS 1051 PIANO CLASS FOR NON-MUSIC MAJORS**

(Sec 1-2) 2 cr

**Instructor:** STAFF

**Dist Req:** none

Also offered thru Extension. 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 a 16-unit electronic 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: "Pianolab" 2nd edition, by Lindeman. 1051 covers Chapters 1-5, including major 5-finger patterns, 8-note scales, root position triads, and I-IV-V chords.

**Class time:** 10% lecture, 90% laboratory

*The distribution requirement (Dist Req) information is only valid for CLA, IT and CSOM and for groups A, B, C and D.*

*Look for UCIP on the University Computer Network via Gopher*



**Workload:**

**Grade:** 30% mid-quarter exam(s), 30% final exam, 30% quizzes, 10% class participation

**Exam format:** individual keyboard performance (plus some written theory)

**MUS 1151 PIANO: CLASS LESSONS**

(Sec 1-6) prereq mus maj, #, 2 cr

Instructor: STAFF

Dist Req: none

A beginning course for freshman music majors or minors with limited keyboard background. Co-requisite for freshman music theory. Taught by graduate assistants in an electronic piano lab. Emphasis is on functional skills, such as reading, transposing, harmonizing, improvising, and playing by ear, along with keyboard theory, technique, and repertoire. Includes lecture, group and individual performance, and some individual instruction. Text: "Piano for the Developing Musician (PDM I)", 2nd edition, by Hilley and Olson. 1151 covers Chapters 1-4.

**Class time:** 10% lecture, 90% laboratory

**Workload:**

**Grade:** 30% mid-quarter exam(s), 30% final exam, 30% quizzes, 10% class participation

**Exam format:** individual keyboard performance

**MUS 1161 DICTION FOR SINGERS I**

(Sec 1) prereq pre-mus or mus maj or minor, 1 cr

Instructor: HERZBERG J

Dist Req: none

This course is designed for Voice Performance Majors. International Phonetic Alphabet is taught. Students learn how to transcribe to and from IPA into Italian, proper pronunciation for lyric diction, and elementary Italian grammar and vocabulary. Special attention is given to translation of song texts, proper articulation of Italian consonants and vowels, double consonants, and the relationship between good Italian diction and Legato singing. Students read and sing in class, critique their peers performances. Teaching methods include lecture, demonstration, written assignments and evaluations, reading and listening assignments, opera videos.

**Class time:** 25% lecture, 25% discussion, 25% laboratory, 25% in-class written work

**Workload:** 10 pages of reading per week, 2 exams, 5-10 in-class performances (depending on class/course size)

**Grade:** 25% mid-quarter exam(s), 25% final exam, 40% in-class presentations, 10% class participation

**Exam format:** performance in class; transcription to and from International Phonetic Alphabet; listing

**MUS 1440 ENSEMBLE**

(Sec 1) prereq #, 1 cr

Instructor: VAN J

Dist Req: (CLA: D) (IT: D) (CSOM: D)

Preparation and performance of music for classical guitar in duo, trio and quartet formats (lower division credit). Prerequisite: music major or minor or consent of instructor. Audition required.

**Class time:** 50% discussion, 50% individual rehearsal (problem solving)

**Workload:** 1 exam, 1-2 hours preparing assigned music for rehearsal

**Grade:** 50% final exam, 30% class participation, 20% problem solving

**Exam format:** concert performance

**MUS 1440 ENSEMBLE**

(Sec 3) prereq #, 1 cr

Instructor: STAFF

Dist Req: (CLA: D) (IT: D) (CSOM: D)

Restricted to Piano Principles and Piano Minors. Students study duet and/or two-piano repertoire with a partner, receive weekly coaching (one-half hour) with a graduate assistant, and perform in a recital during the last week of classes. If a suitable partner is not available, students may be assigned to accompany a singer or instrumentalist. Contact the faculty coordinator for teacher assignment and lesson times.

**Class time:** 100% laboratory

**Workload:** approx. 1 hour a day (total) for individual practice plus rehearsal with partner

**Grade:** 50% final exam, 50% class participation

**Exam format:** performance

**MUS 1480 MARCHING BAND**

(Sec 1) prereq #, 1 cr

Instructor: BECHER E

Dist Req: none

The University of Minnesota Marching Band performs at all home football games, at an away game, at a Minnesota Vikings halftime, several indoor concerts, and concerts across the state. All students receive one academic credit for Marching Band. Members do not have to be music majors in order to join; approximately 90% of students in band are not music majors. Part-time and visiting students may also register for Marching Band through Continuing Education and Extension; high school seniors may enroll through the post-secondary options program. The official opening of the Marching Band season is Spat Camp, a 10-day intensive preparation, camp during which students learn marching and music fundamentals. Spat Camp begins September 3; incoming Marching Band freshmen have special orientation dates on September 1 and 2. Everyone who auditions becomes a member of the band. Rehearsals are held Monday through Thursday from 3:45 to 5:30 p.m. as well as Friday evenings and Saturday mornings before all home games. Members are required to attend all rehearsals, Spat Camp, periodic sectionals, and performances.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

**MUS 1521 KEYBOARD HARMONY**

(Sec 1) prereq keyboard maj, #, 2 cr

Instructor: STAFF

Dist Req: none

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

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in an electronic piano lab. (advanced non-keyboard majors may substitute one quarter of MUS 1521 for MUS 1151-2-3 with instructor permission) Test: "Harmonization at the piano" 6th edition, by Frackenpohl. 1521 covers chapters 1-4.

**Class time:** 10% lecture, 90% laboratory

**Workload:**

**Grade:** 30% mid-quarter exam(s), 30% final exam, 30% quizzes, 10% class participation

**Exam format:** individual keyboard performance

### MUS 3029 MUSIC IN THE 20TH CENTURY

(Sec 1) prereq non-music maj, 4 cr

Instructor: JACKSON D

Dist Req: none

The objectives of this course are: 1) to survey the history of European/American music from the 1880s - present, incorporating the established canon and the radical avant garde, high-art and popular music, and the contributions of men and women as composers, performers, and subjects of musical compositions; 2) to encourage the re-examination of aesthetic assumptions by exploring a rich diversity of music from a comparative international perspective and by integrating the influences of non-western music on western composers; 3) to explore the molding of creative identities through contextual biographies of composers, accounting for race, class, and gender; 4) to provide a framework for active involvement in listening, focusing on representative compositions while developing an awareness of concurrent developments in the pictorial arts, dance, and literature. The course is divided into four units: Unit I-first three decades of 20th century, examining the origins of modernism in music (geographically); Unit II-emergence of national identities and aspirations in period between the wars (geographically); Unit III-IV-organized topically, moving through the peak years of post-war modernism and tracing the course of post-modernism.

**Class time:** 75% lecture, 25% discussion

**Workload:** 50 pages of reading per week, 3 papers

**Grade:** 100% written reports/papers

**Exam format:** take-home essay questions

### MUS 3220 CHAMBER WINDS

(Sec 1) prereq #, 1 cr

Instructor: BECHER E

Dist Req: none

The Chamber Winds consists of outstanding wind and percussion players who perform small ensemble literature of all periods. Chamber Winds rehearses several times a week, and performers are selected based upon the instrumentation of works scheduled for the concert.

**Class time:** 75% full rehearsal, 25% sectionals and some individual attention

**Workload:** depends on technical and musical proficiency

**Grade:** 100% class participation

**Exam format:** no exams, knowledge of musical parts required.

### MUS 3410 CONCERT BAND

(Sec 1) prereq #, 1 cr

Instructor: BECHER E

Dist Req: (CLA: D) (IT: D) (CSOM: D)

Registering for Music 3410/5410 offers three sections to choose

from, each of which is a different musical ensemble. Symphonic Wind Ensemble features approximately 40-50 of the finest wind and percussion players on campus. The best wind and percussion literature is performed, and the group gives two or three concerts each quarter. The Symphonic Wind Ensemble tours extensively throughout the state and beyond. Members are selected through a competitive audition that takes place before the beginning of fall quarter. Symphonic Band rehearses twice a week, performing standard repertoire for band along with more contemporary works. The group occasionally tours within the state and gives two or three concerts each quarter. Membership is open to all University students. North Star Band rehearses one night a week during winter and spring quarters. There are no formal auditions other than for chair placement, and the band plays one campus concert per quarter. It is an exceptional opportunity for students who desire a good musical experience but cannot afford more than two hours of rehearsal per week. For more information, call 624-2008.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

### MUS 3410 CONCERT BAND

(Sec 2) prereq #, 1 cr

Instructor: BECHER E

Dist Req: (CLA: D) (IT: D) (CSOM: D)

The North Star Band rehearses twice a week for one hour. There are no formal auditions, other than for chair placement, and the band plays one campus concert per quarter. It is an exceptional opportunity for students who desire a good musical experience but cannot afford more than two hours of rehearsal per week.

**Class time:** 75% full rehearsal, 25% sectionals and some individual attention

**Workload:** depends on technical and musical proficiency

**Grade:** 100% class participation

**Exam format:** no exams. knowledge of musical parts required.

### MUS 3440 ENSEMBLE

(Sec 3) prereq #, 1 cr

Instructor: STAFF

Dist Req: (CLA: D) (IT: D) (CSOM: D)

Restricted to Piano Principles and Piano Minors. Students study duet and/or two-piano repertoire with a partner, receive weekly coaching (one-half hour) with a graduate assistant, and perform in a recital during the last week of classes. If a suitable partner is not available, students may be assigned to accompany a singer or instrumentalist. Contact the faculty coordinator for teacher assignment and lesson times.

**Class time:** 100% laboratory

**Workload:** approx. 1 hour a day (total) for individual practice plus rehearsal with partner

**Grade:** 50% final exam, 50% class participation

**Exam format:** performance

### MUS 3741 VOCAL REPERTOIRE SURVEY

(Sec 1) prereq upper div mus maj or #, 2 cr

Instructor: HERZBERG J

Dist Req: none

Undergraduate survey of major vocal solo composers, composi-

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tions and song cycles from Bach through Mahler and Wolf. Includes listening and reading assignments, poetic and musical analysis, in class discussion, performances and lectures. Concentrates on solo vocal German repertoire. M3742 taught winter quarter emphasises French solo vocal literature.

**Class time:** 50% lecture, 25% discussion, 25% attendance and participation (performance in class)

**Workload:** 25 pages of reading per week, 2 exams, 1 paper, weekly quizzes; weekly listening assignments

**Grade:** 25% mid-quarter exam(s), 25% final exam, 5% written reports/papers, 5% special projects, 15% quizzes, 15% class participation

**Exam format:** written and listening exam. includes listing, fill-in-the-blank, essay questions

### MUS 5220 CHAMBER WINDS

(Sec 1) prereq #, 1 cr

Instructor: BECHER E

Dist Req: none

The Chamber Winds consists of outstanding wind and percussion players who perform small ensemble literature of all periods. Chamber Winds rehearses several times a week, and performers are selected based upon the instrumentation of works scheduled for the concert. For more information call the Band Office at 624-2008.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

### MUS 5410 BAND

(Sec 2) prereq #, 1 cr

Instructor: BECHER E

Dist Req: none

The Symphonic Band rehearses twice a week. Standard repertoire for band is performed along with more contemporary works. The group occasionally tours within the state and gives frequent concerts on campus. Membership is open to all University students.

**Class time:** 75% full rehearsal, 25% sectionals and some individual attention

**Workload:** depends on technical and musical proficiency

**Grade:** 100% class participation

**Exam format:** no exams. knowledge of musical parts required.

### MUS 5440 ENSEMBLE

(Sec 1) prereq #, 1 cr

Instructor: STAFF

Dist Req: none

Graduate level. Restricted to Piano Principals and Piano Minors. Students study duet and/or two-piano repertoire with a partner, receive weekly coaching (one-half hour) with assigned faculty, and perform in a recital during the last week of classes. If a suitable partner is not available, students may be assigned to accompany a singer or instrumentalist. Contact the faculty coordinator for teacher assignment and lesson times.

**Class time:** 100% individual coaching of performance pairs

**Workload:** approx 1 hour a day individual practice plus rehearsal with partner

**Grade:** 50% final exam, 50% class participation, performance and lessons

**Exam format:** performance

### MUS 5440 ENSEMBLE

(Sec 1) prereq #, 1 cr

Instructor: VAN J

Dist Req: none

Preparation and performance of music for classical guitar in duo, trio and quartet formats. Prerequisite: music major or minor, or consent of instructor, audition required.

**Class time:** 50% discussion, 50% individual rehearsal (problem solving)

**Workload:** 1 exam, 1-2 hours preparing assigned music for rehearsal

**Grade:** 50% final exam, 30% class participation, 20% problem solving

**Exam format:** concert performance

## MIDIEVAL STUDIES

### MEST 5610 TOPICS IN MEDIEVAL STUDIES

(Sec 2) prereq 1 yr work in some area of Middle Ages, reading knowledge of appropriate language, 4 cr

Instructor: GRIMSTAD K

Dist Req: none

The course focuses on reading two Old Norse sagas and discussing the relevant scholarship on these sagas. Discussion will be structured around class reports on assigned articles. Students are asked to write one 10-15 page research paper by the end of the course.

**Class time:** 5% lecture, 95% discussion

**Workload:** 50 pages of reading per week, 1 paper, oral class reports on articles read

**Grade:** 80% written reports/papers, 10% in-class presentations, 10% class participation

**Exam format:** no exams

## NATURAL RESOURCES

### NRES 3001 COLLOQUIUM IN NATURAL RESOURCES AND ENVIRONMENTAL STUDIES

(Sec 2) max 4 cr, 1 cr

Instructor: NEWMAN R

Dist Req: none

This is a lecture-discussion course to introduce contemporary issues related to exotic (non-native) plants and animals. Topics will include intentional and accidental introductions, effects of exotics on native communities, and methods of prevention and control. Both terrestrial and aquatic exotics will be considered. Lectures and readings will provide background material for discussion of the issues. Guest lectures will provide the viewpoint of specialists. Quizzes, discussion questions and class participation will be the basis for the grade.

**Class time:** 30% lecture, 30% discussion, 40% guest lectures

**Workload:** 30 pages of reading per week, 6 quizzes or discussion questions

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**Grade:** 30% class participation, 40% quizzes and discussion questions

**Exam format:**

### **NRES 3050 EXPERIENCE AND TRAINING IN A FIELD SETTING**

(Sec 1) prereq #, 1-4 cr

Instructor(s): UNDERWOOD J, SPLETT P

Dist Req: none

Students can obtain credit for an approved work experience or participating in a field setting. A paper and oral presentation are required. The length and detail is dependent upon the number of credits taken.

**Class time:**

**Workload:** 1 paper, oral presentation

**Grade:** 100% paper and oral presentation

**Exam format:**

## **NORWEGIAN**

### **NOR 1101 BEGINNING NORWEGIAN**

(Sec 1) 5 cr

Instructor: MCBURNEY

Dist Req: none

Proficiency oriented language instruction. Focusing on four areas reading, listening, writing and speaking.

**Class time:** 70% lecture, 30% role playing - games, colorforms, stories, discussion

**Workload:** 15 pages of reading per week, 1 exam, 1 essay of 1-2 pp; homework from workbook

**Grade:** 20% final exam, 20% written reports/papers, 5% special projects, 30% quizzes, 5% in-class presentations, 20% class participation

**Exam format:** 4-5 pp listening exercise, reading exercise, several short grammatical exercises, essay

### **NOR 1104 INTERMEDIATE NORWEGIAN**

(Sec 1) prereq 1103 or equiv, 5 cr

Instructor: HOMSTAD P

Dist Req: none

The textbook contains authentic texts from Norwegian magazine, newspapers and books, providing student with an introduction to contemporary Norway. Special features include small group work, process-oriented writing, video production or other special projects. NOR 1104 demands active participation from the student.

**Class time:** This is a learner-centered class; much interaction between students and student/teacher.

**Workload:** average of 10 hours per week outside of class

**Grade:**

**Exam format:** short essay, short answer, listening, speaking

### **NOR 3670 READINGS IN NORWEGIAN LITERARY TEXTS**

(Sec 1) max 28 cr; prereq 1106 or equiv, 4 cr

Instructor: MISHLER W

Dist Req: none

The course involves reading works of contemporary Norwegian

literature (in Norwegian) and discussing and writing about them (also in Norwegian). The idea is to give the student of the kinds of literature being written in Norway in the contemporary period.

**Class time:** 50% lecture, 50% discussion

**Workload:** 20 pages of reading per week, 2 exams, 8-10 quizzes

**Grade:** 25% mid-quarter exam(s), 25% final exam, 25% quizzes, 25% class participation

**Exam format:** translation, single sentence; answers, short essay

## **OPERATION & MGMT SCIENCES**

### **OMS 1020 DATA ANALYSIS AND STATISTICAL INFERENCE FOR MANAGERS**

(Sec 1-2) prereq IDSc 1010, Math 1111...Math 1131 rec, 4 cr

Instructor: CURLEY S

Dist Req: none

Introduction to probabilistic and statistical techniques for decision making, including inferential statistics, applications to quality control, analysis of variance and experimental design, and multiple regression. Using computer software and data in statistical analysis. Introduction to formal modeling for managerial decision making and problem solving. Emphasis on the use of data in decision making. OMS 1020 is a course in formal modeling for decision making. Upon completion of this course you should be able: 1) to understand uses of formal models at both general and specific levels; and the advantages and limitations of various models; 2) to use basic techniques of inferential data analysis, statistical quality control, and regression modeling; 3) to use software to analyze data for decision making; 4) to analyze a set of data, to reach a conclusion based on these analyses, and to make and defend a recommended course of action; 5) to communicate the results of formal analyses in a management summary; and 6) to take advanced courses in quantitative methods in the School of Management and other CSOM courses requiring knowledge of quantitative methods.

**Class time:** 75% lecture, 25% laboratory

**Workload:** 60 pages of reading per week, 2 exams, 4 papers

**Grade:** 25% mid-quarter exam(s), 35% final exam, 40% written reports/papers

**Exam format:** all or mostly-short answer and problems

### **OMS 5170 SIMULATION MODELING**

(Sec 1) 4 cr

Instructor: KELTON D

Dist Req: none

Objectives: Study the techniques and application of computer simulation of existing or proposed real-world facilities and processes. Models of such facilities or processes are often complex, precluding traditional analytical techniques. Students will learn to do simulations in a programming language, to plan simulation studies, as well as analyze and interpret the results. Additional topics include selecting input probability distributions, random-number generators, generating random variates, statistical analysis of simulation output, and variance-reduction techniques.

**Class time:** 100% lecture

**Workload:** 20 pages of reading per week, 1 paper, 6 computer programs

**Grade:** 30% written reports/papers, 70% computer programs

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Exam format:

## PHILOSOPHY

### PHIL 1002 INTRODUCTION TO PHILOSOPHY

(Sec 11-22) 5 cr

Instructor: ROOT M !!CLA Distinguished Teacher Award!!

Dist Req: (CLA: C) (IT: C) (CSOM: C)

The point of this course is to introduce people to the practice of philosophy and to do this through the careful study and critical discussion of a few classic texts. The course is organized around one central question: what is a good life? To answer the question, we will consider the kinds of things that give a person's life significance and value and, in particular, how the quality of a life depends on the proper balance of freedom and authority, reason and emotion, dependence and self-reliance, and trust and distrust. We will also consider how a person's race, cultural background and gender affect the quality of a life. We will read the classics of philosophy to discover and understand the answers they give us to these questions, but we will also be critical of their answers and decide for ourselves what is insightful and what is misleading in these classic texts.

**Class time:** 75% lecture, 25% discussion

**Workload:** 60 pages of reading per week, 5 papers, 2 group projects

**Grade:** 100% written reports/papers

**Exam format:**

### PHIL 1002 INTRODUCTION TO PHILOSOPHY

(Sec 1-10) 5 cr

Instructor: WATERS C

Dist Req: (CLA: C) (IT: C) (CSOM: C)

The study of philosophy involves deep and systematic thinking about some of the most fundamental intellectual problems of human inquiry. This course will introduce a broad range of philosophical problems and some of the most successful attempts to solve them (within European/Anglo-American tradition). Despite its abstract nature, the study of philosophy brings practical skills and this course is designed to help students develop their abilities to define complex issues precisely, to construct and criticize arguments, to write clearly, and to develop an open-mindedness towards new and challenging ideas. Most of all, however, this course is aimed towards helping students develop an appreciation for philosophy (e.g. what ultimately makes an action right or wrong?), philosophy of religion (e.g. what arguments can be given for or against the existence of God?), logic (e.g. what would be an ideal model of good reasoning?), epistemology (e.g. what is the nature of scientific justification?), philosophy of mind (e.g. will it be possible for a machine to think?), and social/political philosophy (e.g. is affirmative action unfair?). Seek further info from dept or instructor to determine whether this is right section and course for you.

**Class time:** 75% lecture, 25% discussion

**Workload:** 50 pages of reading per week, 2 exams, 3 papers

**Grade:** 15% mid-quarter exam(s), 30% final exam, 45% written reports/papers, 10% class participation

**Exam format:** essay

### PHIL 1003 INTRODUCTION TO ETHICS

(Sec 1) 5 cr

Instructor: PETERSONS !!CLA Distinguished Teacher Award!!

Dist Req: (CLA: C) (IT: C) (CSOM: C)

The main part of the course is a study of three ethical theories, those of John Stuart Mill, Immanuel Kant, and Aristotle. In discussions and in their short papers students apply the theories to examples of actions from the novel "Middlemarch" by George Eliot and the novel "The Surrounded" by D'Arcy McNickle to determine if the theories imply that the actions were or were not, the right thing to do. In discussion of "The Surrounded" the question is raised whether or not theories by European authors can be used to assess the decisions of the Native American characters in "The Surrounded". In the first weeks of the course students discuss relativism, skepticism, and other "isms." The concluding weeks of the course return to the topic of relativism in discussion of the question whether the three ethical theories studied are compatible with one another or conflict with one another.

**Class time:** 95% discussion, 5% quizzes

**Workload:** 200 pages of reading per week, 4 papers, 22 quizzes

**Grade:** 80% written reports/papers, 10% quizzes, 10% attendance at class discussion

**Exam format:** one-word answers to short quizzes

### PHIL 3601 SCIENTIFIC THOUGHT

(Sec 1) prereq 1002, 2 natural science courses or completion of Group B, 4 cr

Instructor: WATERS C

Dist Req: (IT: C)

People once believed the sun rotated around a motionless Earth, that maggots spontaneously generated from rotting meat, and that continents are fixed to the Earth. These views were held and passed on by the most learned persons of their times and led to useful predictions and technological advances. Nevertheless, today's scientists believe these "outdated" views were fundamentally mistaken and now pass on different set of beliefs. Why should we believe today's scientists; after all, it would be reasonable to predict within a 100 yrs, today's "facts" and theories will be added to trash heap of outdated scientific beliefs. We will examine nature of scientific justification and try to determine exactly what reasons we have for accepting contemporary scientific theories. We will conclude our study by examining scientific creationism controversy. Creationists' attack on evolutionary biology and evolutionists' defense typically presuppose mistaken philosophies of science which sometimes help creationists come out on top in public debates. Your newly gained understanding of scientific rationality will help sort out these muddled debates and enable you to determine just why we should accept the evolutionary biologists' conclusions.

**Class time:** 75% lecture, 25% discussion

**Workload:** 100 pages of reading per week, 2 exams, 1 paper

**Grade:** 20% mid-quarter exam(s), 30% final exam, 40% written reports/papers, 5% in-class presentations, 5% class participation

**Exam format:** essay

### PHIL 5005 PLATO

(Sec 1) prereq 3001 or #, 4 cr

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Instructor: PETERSONS !!CLA Distinguished Teacher Award!!

Dist Req: none

The course will be chiefly a study of Plato's dialogue, the "Parmenides", in connection with which the class will also study Constance Meinwald's interpretation in her book, "Plato's Parmenides". In the "Parmenides" Plato seems to engage in self-criticism - in arguments against what commentators call "the Theory of Forms": the course will also look at some passages from other dialogues in which Plato discusses forms. All class meetings will be used for small (3-4 member) group discussions of projects given out by the instructor.

Class time: 100% discussion

Workload: 35 pages of reading per week, 4 papers

Grade: 90% written reports/papers, 10% class participation

Exam format:

### PHIL 5231 PHILOSOPHY OF LANGUAGE

(Sec 1) prereq 1001, 5201 or #, 4 cr

Instructor: KAC M

Dist Req: none

The first half of this course will be devoted to canonical works in the theory of reference by Lewis, Russell, Quine, Strawson and others. The second half will be devoted to a single large-scale work (to be announced). This course is not recommended for undergraduates. A separate course at the 3-level in philosophy of language exists for them.

Class time: 100% lecture

Workload: 30 pages of reading per week

Grade:

Exam format: essay

## PHYSICS

### PHYS 1001 THE PHYSICAL WORLD

(Sec 1) §any phys courses other than 1002, 1061, no cr for IT stu; prereq 1 yr high school algebra, 4 cr

Instructor: WADDINGTON C

Dist Req: (CLA: B) (CSOM: B)

Fundamental laws and principles governing the physical world, discussed in the context in which they are encountered in modern science and technology. Associated lab is Phys 1005. This course will consist of a description of some of the fundamental principles that describe the physical world, discussed with a minimum of mathematics and scientific jargon. It is designed to allow the student to gain an appreciation of the scientific method that has played such a major role in shaping our society. Attention will be directed at certain specific examples of physical phenomena in order to illustrate the fundamental principles that underlie them. Students will be expected to read the assigned textbook and then be prepared to relate their reading to the lectures and demonstrations. Text: "Inquiry into Physics" by Ostdiek and Bord.

Class time: 80% lecture, 5% discussion, 15% demonstrations

Workload: 50 pages of reading per week, 4 exams

Grade: 25% mid-quarter exam(s), 25% final exam, 50% quizzes

Exam format: multiple choice, problem-solving questions

### PHYS 1041 INTRODUCTORY PHYSICS

(Sec 1-9) prereq high schl algebra and plane geometry, 5 cr

Instructor: CAMPBELL C

Dist Req: (CLA: B) (CSOM: B)

Physics 1041 and 1042 introduce the fundamental concepts which underlie our understanding of the physical phenomena of the Universe. We begin with the description and explanation of motion, building on everyday experience, and mathematical tools from algebra and geometry, to describe quantitatively the behavior of particles and more complicated objects. By considering a variety of applications (gravitation, circular motion, etc.) we demonstrate the power and versatility of the physical laws. In the process we lay a solid foundation for subsequent study in Physics 1042 of the many forms of energy, conservation principles, and a variety of other physical phenomena. Throughout our study we seek to exploit and refine physical intuition through laboratory exercises and classroom demonstrations. In lectures, laboratories, homework and tests, we work to develop and apply effective and systematic problem-solving strategies, indispensable in the study of physics, and invaluable in essentially all other professional pursuits.

Class time: 60% lecture, 13% discussion, 27% laboratory

Workload: 15 pages of reading per week, 5 exams, 4 lab reports

Grade: 35% final exam, 40% quizzes, 15% lab work, 10% discussion session participation

Exam format: problem solving

### PHYS 1251 GENERAL PHYSICS I

(Sec 1-41) §1271 thru 1291; 1311 thru 1341, 1411H thru 1441H, 1451H thru 1454H; prereq Math 1251 or ¶Math 1251, 4 cr

Instructor: STAFF

Dist Req: (CLA: B) (CSOM: B)

The first quarter of a four-quarter calculus-based general physics course. It will deal with principles of mechanics and will involve detailed analysis of and solutions to real-life situations involving physics ideas.

Class time: 50% lecture, 10% discussion, 40% laboratory, 6 quizzes

Workload: 15 pages of reading per week, 7 exams, homework will be collected and evaluated

Grade: 40% mid-quarter exam(s), 40% final exam, 5% lab work, 15% problem solving

Exam format: Problem situations to be analyzed. Usually a numerical answer is expected.

### PHYS 1253 GENERAL PHYSICS III

(Sec 1-14) §1271 thru 1292, 1311 thru 1341; 1411H thru 1441H, 1451H thru 1454H; prereq 1252, Math 1261 or ¶Math 1261, 4 cr

Instructor: STAFF

Dist Req: (CLA: B) (CSOM: B)

Physics 1253 is the third quarter of a three-quarter introductory course in physics for science and engineering students. The material covered will include the basic ideas of gravitation and electromagnetism and their application to simple devices and circuit elements. Three lectures will be presented weekly. In weekly recitation sessions students we have the benefit of working in groups of three or four in recitations sections of consisting of no more than 15-20 students. A weekly laboratory session will be integrated with the materials covered in the lectures and recita-

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tions.

**Class time:** 50% lecture, 17% discussion, 33% laboratory

**Workload:** 5 exams, homework

**Grade:** 25% final exam, 50% quizzes, 12% lab work, 3% class participation, 10% problem solving

**Exam format:**

### PHYS 1254 GENERAL PHYSICS IV

(Sec 1-3) §1271 thru 1291, 1311 thru 1341, 1411H thru 1441H, 1451H thru 1454H; prereq 1253, 4 cr

Instructor: STAFF

Dist Req: (CLA: B) (CSOM: B)

Introductory calculus based physics, 4th quarter, introduction to modern physics. Subjects: relativity, thermodynamics, kinetic theory, statistical mechanics, quantum theory, atomic and nuclear physics.

**Class time:** 100% lecture

**Workload:** 20 pages of reading per week, 5 exams

**Grade:** 40% final exam, 60% quizzes

**Exam format:** problems, conceptual questions

### PHYS 1454H HONORS PHYSICS IV

(Sec 80-85) §1254, 1341, 1441H; prereq 1453H, consent of IT Honors office, 4 cr

Instructor: STAFF

Dist Req: (CLA: B) (CSOM: B)

The fourth quarter of this sequence will deal with "Modern Physics" i.e. quantum physics, atomic physics, and electromagnetic waves. The text used, as in the previous quarters is to be Fishbane, Gasiorowicz, and Thoratou, "Physics for Scientists and Engineers" in which the last chapters are relevant for this course.

**Class time:** 50% lecture, 40% laboratory, 10% recitation

**Workload:** 15 pages of reading per week, 4 exams, homework assignments

**Grade:** 40% mid-quarter exam(s), 40% final exam, 5% lab work, 15% problem solving

**Exam format:** problem situations to be analyzed and usually a numerical answer to be presented

### PHYS 5021 INTRODUCTION TO ANALYTIC MECHANICS

(Sec 1) prereq Math 3261 or equiv, 4 cr

Instructor: ELLIS P

Dist Req: none

Text: Symon "Mechanics", Addison-Wesley. Topics: motion particle in 1-3 dimensions including oscillator and central force motion; LaGrange's equations; use of moving coordinate system; motion of a system of particles; rigid body rotation about a fixed axis and in general.

**Class time:** 90% lecture, 10% discussion

**Workload:** 2 exams, problem sets about 1/week

**Grade:** 25% mid-quarter exam(s), 50% final exam, 25% problem solving

**Exam format:** 4 out of 5 problems

### PHYS 5031 TOPICS IN MATHEMATICAL PHYSICS

(Sec 1) prereq two 5000-level math courses, 4 cr

Instructor: VALLS O

Dist Req: none

The purpose of the course is to help the student acquire familiarity with and confidence in the use of mathematical methods required for success in the physical sciences. The emphasis is on learning how to get results, not on rigor. Main topics in the Fall quarter are complex variable, series summation, asymptotic series, and Fourier series.

**Class time:** 75% lecture, 25% discussion

**Workload:** 2 exams, weekly homework sets, mandatory

**Grade:** geometric mean of exams and homework

**Exam format:** problem solving

### PHYS 5051 CLASSICAL PHYSICS

(Sec 1) prereq 5022, 5024, advanced calculus or #, 4 cr

Instructor: STAFF

Dist Req: none

Classical mechanics, special relativity, and classical electrodynamics. Applications of advanced mathematical techniques. This course sequence is intended principally for first year graduate students in physics. A sound preparation in undergraduate physics is assumed including courses in analytic mechanics and electricity and magnetism at the advanced undergraduate level. Phys 5051 will cover classical mechanics at the level of the text by H. Goldstein.

**Class time:** 80% lecture, 20% discussion

**Workload:** 40 pages of reading per week, 2 exams, 6 problem assignments

**Grade:** 25% mid-quarter exam(s), 50% final exam, 25% problem solving

**Exam format:** problems to be solved

### PHYS 5121 METHODS OF EXPERIMENTAL PHYSICS I

(Sec 1) prereq 3513, 3516 or #, 5 cr

Instructor(s): GANZ, RUDDICK

Dist Req: none

This course is the first of a three-quarter sequence on the techniques used in a modern experimental physics laboratory. Because of the importance of electronic instrumentation in today's physics experiments, the first two quarters of the lab will deal with the use of digital and analog techniques for electronic signal processing. The second quarter will focus on computer interfacing and include several small experiments. The third quarter will consist primarily of a single experimental project that is designed and executed by the student. A knowledge of basic Electricity and Magnetism and circuits at the 1000 level is assumed, as is elementary Modern Physics at the 3000 level. English writing skills at the university level are required. No previous knowledge of electronics or logic is assumed. Text: "The Art of Electronics" by P. Horowitz and W. Hill, and a lab manual will be handed out in class.

**Class time:** 40% lecture, 60% laboratory

**Workload:** 15 pages of reading per week

**Grade:** 20% mid-quarter exam(s), 20% final exam, 60% lab work

**Exam format:**

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**PHYS 5201 THERMAL AND STATISTICAL PHYSICS**

(Sec 1) prereq 3513 or equiv, 4 cr

Instructor: HUANG C

Dist Req: none

First the idea of statistics will be introduced. Then the fundamental concepts of statistical physics will be developed. We will finish the quarter with several important applications of statistical physics to the thermal physics and thermodynamics.

**Class time:** 100% lecture

**Workload:** 20 pages of reading per week, 2 exams, 2 papers

**Grade:** 25% mid-quarter exam(s), 45% final exam, 30% problem solving

**Exam format:** closed book (no notes, no calculators)

**PHYS 5231 INTRODUCTION TO SOLID-STATE PHYSICS**

(Sec 1) prereq 1254, 3512 or #, grad or adv undergrad in sci or eng, 4 cr

Instructor: WEYHMANN W

Dist Req: none

This course is a comprehensive introduction to solid state physics intended for use as a minor by graduate students in the physical sciences and engineering. A standard text for this course has been "Introduction to Solid State Physics" by C. Kittel. Since the complete course is three quarters long, somewhat more depth can be achieved on selected topics. In addition essential background material from subjects such as thermodynamics and statistical mechanics will be reviewed as necessary. Thus the course is intended to be a self-contained survey of the fundamental areas of solid state physics.

**Class time:** 80% lecture, 20% discussion

**Workload:** 6-7 homework; 1-2 hour exams; final

**Grade:** final exam, hour exams together and homework will contribute equally to the final grade

**Exam format:** mostly quantitative problems, though some qualitative questions

**PLANT BIOLOGY****PBIO 3960 RESEARCH TOPICS IN PLANT BIOLOGY**

(Sec 1) prereq Biol 1103 or Biol 3012, 1 cr

Instructor: RUBENSTEIN I

Dist Req: none

Provide students with an understanding of research in Plant Biology and how faculty approach scientific problems. Provide an opportunity for students to meet with faculty to discuss careers in science. Encourage students to participate in research opportunities as undergraduates working in a professor's lab.

**Class time:** 75% lecture, 25% discussion

**Workload:** four 2 page summaries of talks, graded S/N.

**Grade:** 100% written reports/papers

**Exam format:**

**PLANT PATHOLOGY****PLPA 1002 PLANT DISEASES AND YOUR GARDEN**

(Sec 1) 2 cr

Instructor: MACDONALD D !!College of Agriculture Distinguished Teacher!!

Dist Req: none

This course places major emphasis on the development of each student's problem-solving skills and will, as far as is practical, utilize plant problems about which at least some of the students have first-hand knowledge and concerns. The actual course content will vary from year to year and will be determined as much as possible by the plant diseases that have occurred during the previous summer. The students will learn: 1) to look at plants in a new way to see how those plants deviate from "normal", 2) to determine likely causes of those deviations and then 3) to test the validity of their preliminary diagnoses. Because no really appropriate text exists, students will receive handouts and library reading assignments to provide them with factual information beyond that presented-developed in class. Because several plant problems will be under investigation at any one time, students will work in small groups to solve individual "disease situations". Oral presentations by each working group will be used to summarize the steps in and the results of the problem solving processes that each group developed and to share the important facts about the various plant diseases with other members of the class.

**Class time:** 30% lecture, 10% discussion, 40% laboratory, 20% slides and movies

**Workload:** 15 pages of reading per week, 3 exams

**Grade:** 60% quizzes, 10% in-class presentations, 30% problem solving

**Exam format:** essay

**PLPA 3090 RESEARCH IN PLANT PATHOLOGY**

(Sec 1) prereq 1001 or equiv or #, ar cr

Instructor: STAFF

Dist Req: none

This is an opportunity for undergraduate students to explore research areas in plant pathology with faculty in that department. Research experiences may involve taxonomy of plant pathologies, ecology, biological control, genetics biochemistry, physiology, molecular biology of plant pathologies, microorganisms and the host-pathology interactions. Students would decide upon a research problem in conjunction with their advisor.

**Class time:** 100% Individual instruction

**Workload:** Student assignment are individualized to suit objectives of research problems.

**Grade:**

**Exam format:** May not have exam. Will depend upon the agreement between faculty member and faculty advisor.

**PLPA 5201 BIOLOGY OF PLANT DISEASES**

(Sec 1) prereq Biol 3012 or equiv, 3 cr

Instructor: PERCICH J

Dist Req: none

Principles and concepts of plant diseases caused by selected bacteria, fungi, viruses and nematodes. In-depth presentation of pathogen biology (life cycles, dispersal), factors that cause dis-

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ease (pathogen virulence, host susceptibility and environment); and interaction of pathogen with the plant (physiology, defense mechanisms, genetics). Epidemiology (disease forecasting and dynamics) and control (integrated biological and chemical) measures appropriate to plant diseases.

**Class time:** 60% lecture, 40% discussion

**Workload:** 20 pages of reading per week, 2 exams

**Grade:** 50% mid-quarter exam(s), 25% final exam, 25% written reports/papers

**Exam format:** essay

### **PLPA 5202 BIOLOGY OF PLANT DISEASES LABORATORY**

(Sec 1) prereq 5201 or 5201, 2 cr

Instructor: PERCICH J

Dist Req: none

Laboratory and experimental approaches emphasizing plant pathogen identification, isolation, culture, inoculation and recovery from infected plants. Plant and pathogen interactions illustrating pathogenesis and plant defense mechanisms.

**Class time:** 100% laboratory

**Workload:** 10 pages of reading per week

**Grade:** 100% lab work

**Exam format:** essay

### **PLPA 5214 PLANT VIROLOGY**

(Sec 1) prereq PBio 3012 or equiv, 4 cr

Instructor(s): BANTTARI E, LOCKHART B

Dist Req: none

The lectures in the first half will cover the effects of viruses on host plants, their transmission, epidemiology, identification, diagnosis and control. In laboratory, commonly used techniques for virus transmission, diagnosis and control will be demonstrated first by the instructor and practiced by students. "Hands-on" experience will be required in all laboratory exercises. The text used in the course is by Walkey, D.G.A. 1991, "Applied Plant Virology, edit. Chapman and Hall. Other references will be available on Reserve in the Plant Pathology Library. The second half of the course will deal with viruses as macromolecules rather than as pathogens. Methods for isolation and biochemical, biophysical and molecular characterization of plant viruses will be treated. Laboratory exercises will include centrifugation and ultracentrifugation, electron microscopy, analysis of viral proteins and nucleic acids by polyacrylamide and agarose gel electrophoresis and immunoblotting. Emphasis is placed on the applicability of these techniques to a range of subject areas in addition to virology.

**Class time:** 60% lecture, 10% discussion, 30% laboratory

**Workload:** 40 pages of reading per week, 2 exams, 3 laboratory reports

**Grade:** 60% final exam, 30% lab work, 10% laboratory reports

**Exam format:** essay, short responses, diagrams of viruses, diagnostic techniques, disease identification

## **POLITICAL SCIENCE**

### **POL 1025 WORLD POLITICS**

(Sec 1) 4 cr

Instructor: FREEMAN J !!Morse Alumni Teaching Award

**Winner; also CLA Distinguished Teacher Award!!**

Dist Req: (CLA: C) (IT: C) (CSOM: C)

World Politics introduces students to the study of international relations and also to the debates over certain global issues. In the first part of the quarter we examine some of the theoretical frameworks scholars use to investigate the relations between nations and nation-states. We also examine various explanations for war and for the global distribution of wealth. The emphasis is on developing analytical skills rather than on memorizing names and dates in this first part of the course. In part two, we take a closer look at some global political issues, including the threat posed by nuclear proliferation and the deteriorating quality of life of many of the world's people.

**Class time:** 95% lecture, 5% discussion

**Workload:** 100 pages of reading per week, 3 exams

**Grade:** 60% mid-quarter exam(s), 40% final exam, 2 mid-quarter exams

**Exam format:** short answer and essay

### **POL 1041 CONTEMPORARY POLITICAL IDEOLOGIES**

(Sec 1) 4 cr

Instructor: FOGELMAN E

Dist Req: (CLA: C) (IT: C) (CSOM: C)

In this course we examine major ideologies that affect present-day politics, including democracy, nationalism, capitalism, feminism, Islamic fundamentalism, and others. We discuss the values, beliefs, goals, and program of action of each ideology as well as the central political issues it addresses. The main purpose is to clarify and compare the distinctive ideas of important contemporary ideologies.

**Class time:** 80% lecture, 20% discussion

**Workload:** 2 exams, 1 paper

**Grade:** 20% mid-quarter exam(s), 40% final exam, 40% written reports/papers

**Exam format:** definitions, identifications

### **POL 3085 INTRODUCTION TO POLITICAL RESEARCH**

(Sec 1-2) prereq 3051 or #, 4 cr

Instructor: RICHARDS D

Dist Req: (CLA: A) (IT: A) (CSOM: A)

This course is an introduction to empirical research techniques. Some of the questions we will examine include setting up a research question, developing a model, proper research design, and some basic techniques of data analysis such as regression. The course includes several problem sets and some computer exercises.

**Class time:** 85% lecture, 10% discussion, 5% laboratory

**Workload:** 125 pages of reading per week, 2 exams

**Grade:** 20% mid-quarter exam(s), 50% final exam, 30% problem solving

**Exam format:** short answer, short essay

### **POL 3331 MINNESOTA GOVERNMENT AND POLITICS**

(Sec 1) 1001 rec, 4 cr

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**Instructor:** BACKSTROM C

**Dist Req:** (IT: C)

Broad and detailed consideration of Minnesota's demography, culture, constitution, public opinion, political parties, interest groups, elections, governor, legislature, courts, local government, and policy. Lecture, discussion, group project, essay exams.

**Books:** Gieske, "Minnesota Government and Politics", Hanson, "Tribune of the People", "Guidebooks of MN Agency Services."

**Class time:** 50% lecture, 20% discussion, 30% group project on Minnesota policy

**Workload:** 40 pages of reading per week, 2 exams, 1 paper, 1 group presentation, with paper

**Grade:** 30% mid-quarter exam(s), 40% final exam, 25% special projects, part of grade determined by group presentation, all group members receive same grade

**Exam format:** essay

### **POL 3810 TOPICS IN INTERNATIONAL POLITICS AND FOREIGN POLICY: POLITICAL ECONOMY OF SMALL EUROPEAN STATES**

(Sec 1) 4 cr

**Instructor:** KINDLEY R

**Dist Req:** (IT: C) (CSOM: C)

This course is designed to introduce students to the problems of small state participation in the international economy and the adjustment of domestic political and economic structures to that imperative. It is also meant to draw lessons from that experience generalizable to the rest of Europe, the US and to the nations of other regions as well. The post-Cold War shock now means that peace and prosperity depend on how well Europeans manage economic reintegration and the social and political uncertainty that accompanies it. Though Germany, France and the US may grab the headlines, most of the states of Europe are small; those states being absorbed into Europe are small and the large are experiencing demands for devolution. Hence we intend to reorient students' perspectives on European political economy from simplified versions of post-Cold War privatization and EC issues to insights about fundamental institution building for an internationalized 21st century that only the small European state experience can provide.

**Class time:** 80% lecture, 20% discussion

**Workload:** 70 pages of reading per week, 3 exams, 1 paper

**Grade:** 40% mid-quarter exam(s), 25% final exam, 35% written reports/papers

**Exam format:** identification of terms, essay

### **POL 3835 THE INTERNATIONAL SYSTEM**

(Sec 1) 4 cr

**Instructor:** OREN I

**Dist Req:** (CSOM: C)

The objective of this course is to introduce you to the two major theoretical approaches to study of int'l relations--the realist and liberal paradigms. Realist and liberal theorists view int'l affairs through different sets of "lenses". We will begin by comparing the basic theoretical assumptions which constitute these lenses. Subsequently we will examine in more detail the differences between realist and liberal views on a broad (though not exhaustive) range of issues: the nature of relations among nations, possibility of establishing (new) world order(s), utility of military power, role

and nature of int'l trade, origins of war, existence and nature of national interest, and prospects for cooperation among nations in security, economic, and environmental affairs. My aim is to provide you with a set of conceptual tools that will allow you to analyze current issues as diverse as our trade with Japan, economic aid to the former Soviet Union, and international negotiations over protecting the ozone layer.

**Class time:** 100% lecture

**Workload:** 150 pages of reading per week, 2 exams, 2 papers

**Grade:** 50% final exam, 50% written reports/papers

**Exam format:** essay and short identifications

## **PORTUGUESE**

### **PORT 1001 BEGINNING PORTUGUESE**

(Sec 1-2) 5 cr

**Instructor:** STAFF

**Dist Req:** none

**Text:** Travessia Vol I, Workbook Vol I, Dictionary English/Port-Port/English. The students learn elementary Portuguese, basic aspects of the language, such as: present tense (regular and irregular verbs), vocabulary about basic situations (greetings, family, descriptions, colors, clothing). Introduction to aspects of Brazilian culture.

**Class time:** 15% lecture, 15% closed-circuit TV, 60% discussion, 10% in-class exercises

**Workload:** 10 pages of reading per week, 3 exams, 8 quizzes

**Grade:** 15% mid-quarter exam(s), 25% final exam, 20% quizzes, 10% in-class presentations, 20% class participation, 10% compositions

**Exam format:** essay questions, exercises for completion (fill in the blank)

### **PORT 1004 INTERMEDIATE PORTUGUESE GRAMMAR AND COMPOSITION**

(Sec 1) prereq 1003, 5 cr

**Instructor:** STAFF

**Dist Req:** none

**Text:** Travessia Vol II, Workbook II, Dictionary. Intermediate Portuguese: verbs (more elaborate tenses), short stories, cultural aspects.

**Class time:** 10% lecture, 20% closed-circuit TV, 70% discussion

**Workload:** 20 pages of reading per week, 3 exams, 1 presentation, 8 quizzes

**Grade:** 15% mid-quarter exam(s), 25% final exam, 20% quizzes, 10% in-class presentations, 20% class participation, 10% compositions

**Exam format:**

### **PORT 3003 CONVERSATION AND COMPOSITION**

(Sec 1) prereq 1006 or equiv, 5 cr

**Instructor:** STAFF

**Dist Req:** none

The course will concentrate on some practical situations as a pretext to practice conversation and composition. Some readings and discussions passing on some aspects of Brazilian culture will contribute to the improvement of language skills.

**Class time:** 20% closed-circuit TV, 80% discussion

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*Look for UCIP on the University Computer Network via Gopher*

**Workload:** 2 exams, 1 oral presentation  
**Grade:** 20% mid-quarter exam(s), 20% final exam, 20% written reports/papers, 20% quizzes, 20% in-class presentations  
**Exam format:**

## PSYCHOLOGY

### PSY 1001 INTRODUCTION TO PSYCHOLOGY

(Sec 1-20) 5 cr  
**Instructor:** PETERSONG !!CLA Distinguished Teacher Award!!  
**Dist Req:** (CLA: C) (IT: C) (CSOM: C)  
 Psychology 1001 is an introduction to the scientific study of human behavior and a prerequisite for all advanced psychology courses. The course introduces the problems, methods, and findings of modern psychology to beginning students, and emphasizes the scientific analysis of behavior. Most of the regular class sessions, on Mondays through Thursdays, will include lectures by senior professors from the Department of Psychology. Each Friday, the class will meet in smaller discussion sections led by advanced graduate students. These sessions will provide an opportunity for questions, review, discussion, and group activities, including written assignments to be completed during the class period.  
**Class time:** 80% lecture, 20% discussion  
**Workload:** 65 pages of reading per week, 4 exams  
**Grade:** 58% mid-quarter exam(s), 17% final exam, 25% problem solving  
**Exam format:** multiple choice

### PSY 1011 CAREER DECISION MAKING

(Sec 1) cannot be applied toward any CLA degree; prereq fr or soph or #, 2 cr  
**Instructor:** KLEIN S  
**Dist Req:** none  
 Textbook is "Joyce Lain Kennedy's Career Book" 2nd edition. Course introduces a career decision making process and provides an opportunity to apply the process to personal career decision making. Students take the Strong Interest Inventory and Myers-Briggs Type Indicator (involves minimal fees). Course requires career research paper and two informational interviews.  
**Class time:** 40% lecture, 30% discussion, 30% group and individual activities  
**Workload:** 30 pages of reading per week, 3 papers, 2 informational interviews and 3 projects  
**Grade:** 45% written reports/papers, 35% special projects, 10% in-class presentations, 10% class participation  
**Exam format:** no exams

### PSY 1011 CAREER DECISION MAKING

(Sec 2) cannot be applied toward any CLA degree; prereq fr or soph or #, 2 cr  
**Instructor:** KLEIN S  
**Dist Req:** none  
 Course is designed to acquaint students with a systematic approach to career decision-making that can be applied throughout life. Objectives: assist students in understanding themselves through identification of interests, values, skills, and personality. Introduce students to occupational resources that can aid career

decision-making and goal setting. Class is very experiential, so attendance and class participation are extremely important. Extra fees of approximately \$10.00. Cannot be applied toward any CLA degree.

**Class time:** 50% lecture, 40% discussion, 10% class presentations and speakers  
**Workload:** 25 pages of reading per week, 6 papers, oral reports, interviews, interactive computer  
**Grade:** 30% written reports/papers, 30% special projects, 15% in-class presentations, 15% class participation, 10% attendance  
**Exam format:** no exams

### PSY 3031 SENSATION AND PERCEPTION

(Sec 1) prereq 1004, 4 cr  
**Instructor:** BURKHARDT D  
**Dist Req:** (CLA: B) (IT: BC) (CSOM: B)  
 This course is concerned with understanding how humans and animals perceive and respond to the external world. It thus deals with "universals" spanning generations, civilizations and the biological kingdom. All the senses are covered in the course - taste, olfaction, touch, pain, hearing and vision. The analysis ranges from the properties of the sense organs themselves to the higher areas of the brain where perception is believed to occur. The approach includes psychological experiments on human perception as well as study of nerve cells in animals and humans. The general question - of how we perceive the sensory world - is a central question in psychology and contemporary neuroscience.  
**Class time:** 100% lecture  
**Workload:** 60 pages of reading per week, 2 exams, readings are technical which will require re-reading and critical thought to understand  
**Grade:** 33% mid-quarter exam(s), 67% final exam  
**Exam format:** multiple choice

### PSY 3604 INTRODUCTION TO ABNORMAL PSYCHOLOGY

(Sec 1) §5604H; prereq 1001, 4 cr  
**Instructor:** IACONO W  
**Dist Req:** (CLA: C) (IT: C) (CSOM: C)  
 The focus of this course is a characterization of different forms of psychopathology. Little time is spent on treatment. Some topics, such as schizophrenia, are covered in depth so students can obtain insight into the complex problems that confront researchers working in this area.  
**Class time:** 90% lecture, 10% discussion  
**Workload:** 60 pages of reading per week, 3 exams, 67  
**Grade:** 67% mid-quarter exam(s), 33% final exam  
**Exam format:** multiple choice

### PSY 3801 INTRODUCTION TO MEASUREMENT AND STATISTICAL METHODS

(Sec 1-6) prereq 1001 or equiv, 4 cr  
**Instructor:** CUDECK R  
**Dist Req:** (CLA: A) (IT: A) (CSOM: A)  
 This is a survey course covering elementary topics in data analysis and statistical methods. The goal of the class is to introduce these methods of data analysis so they can be applied in other advanced courses and in scientific reading. Each of the topics reviewed in the class includes some theoretical background along with ex-

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amples and problems that are designed to reinforce the theory while demonstrating how the methods are applied. Some familiarity with basic algebra is assumed, as is the ability to complete numerical assignments.

**Class time:** 70% lecture, 30% discussion

**Workload:** 40 pages of reading per week, 3 exams, numerical exercises

**Grade:** 60% mid-quarter exam(s), 40% final exam

**Exam format:** multiple choice

### PSY 5137 INTRODUCTION TO BEHAVIORAL GENETICS

(Sec 1) prereq 3135 or 5135 or #, 4 cr

Instructor: MCGUE M

Dist Req: none

The course provides a broad overview of the application of genetic methods to the study of human and animal behavior. Emphasis is placed upon the use of genetic designs and methods to address psychologically relevant questions concerning the nature and etiology of individual differences in behavior. Behavioral characteristics covered include intelligence, schizophrenia, affective disorders and alcoholism. Students successfully completing the course should be able to critically evaluate behavioral genetic research literature.

**Class time:** 100% lecture

**Workload:** 80 pages of reading per week, 2 exams, 1 paper

**Grade:** 30% mid-quarter exam(s), 40% final exam, 30% written reports/papers

**Exam format:** essay

### PSY 5205 APPLIED SOCIAL PSYCHOLOGY

(Sec 1) prereq 3201 or grad stu or #, 4 cr

Instructor: GONZALES M

Dist Req: none

5205 is designed for advanced undergraduates in psychology and graduate students in psychology and related disciplines. APPLIED or ACTION RESEARCH in social psychology is almost as old as the discipline itself. Kurt Lewin-the "father" of social psychology-was the first to advocate the use of social psychological research and theory to respond to social problems. Although interest in this specialty area waned for a number of years, in the last two decades there has been a resurgence of interest in the potential contributions of social psychology to the solution of "real world" problems. 5205 provides for an overview of domains in which social psychological theory and research have been applied outside the laboratory. The quarter begins with a brief overview of distinctions between basic and applied research, and of problems and issues unique to applied work. The duration of the quarter will be devoted to readings and discussion of a select sample of applied settings. These include, but may not be limited to: law and the criminal justice system; aggression and violence; television and the mass media; prejudice and intergroup relations; physical and psychological health; energy conservation; and public policy concerns.

**Class time:** 80% lecture, 20% discussion

**Workload:** 80 pages of reading per week, 2 exams, 1 paper

**Grade:** 33% mid-quarter exam(s), 33% final exam, 33% written reports/papers

**Exam format:** varies from quarter to quarter, most often some multiple choice with a majority essay questions

### PSY 5501 VOCATIONAL PSYCHOLOGY

(Sec 1) prereq 3801 or #, 4 cr

Instructor: DAWIS R

Dist Req: none

This is a survey course designed to acquaint the student with the concepts, methods of study and principal findings of vocational psychology, which studies the behavior of persons as they prepare for, enter into, progress through, and withdraw from their life work. It is primarily a lecture course and relies on selected readings instead of a textbook to supplement the lectures. Students do projects that have to do with assessing work personalities and work environments, and examining the correspondence between the two. Topics include the vocational personality (abilities, needs, values, interests, attitudes, personality traits relevant to work), vocational development, vocational choice, and vocational adjustment.

**Class time:** 100% lecture

**Workload:** 50 pages of reading per week, 2 exams, 1 paper, 6 brief project reports (2-3 pages); paper for graduate students only

**Grade:** 100% final or 100% final plus midqtr whichever is higher

**Exam format:** short answer, essay, multiple choice

### PSY 5703 PSYCHOLOGY OF ORGANIZATIONAL TRAINING AND DEVELOPMENT

(Sec 1) prereq 3801 or equiv, 8 cr in psychology or #, 4 cr

Instructor: CAMPBELL J

Dist Req: none

Theories, methods, and research pertaining to improving performance of individuals at work through learning and instruction. The first half of the course is devoted to methods of training needs analysis and to the presentation of a comprehensive model of training and instructional design. The second half deals with several major applied training problems (e.g., teaching problem solving and decision making skills, interpersonal skills, management development) and with methods for evaluating training effects. The general purposes of the course are to provide the student with a comprehensive and useful framework for how to identify training problems, design training programs and evaluate training results. The student should also gain considerable familiarity with what the field of training and development is like as a profession. The course attempts to show how many different areas of theory and research in psychology can be brought to bear on organizational training problems and issues.

**Class time:** 85% lecture, 10% discussion, 5% guest lecture/discussion

**Workload:** 60 pages of reading per week, 2 exams

**Grade:** 50% mid-quarter exam(s), 50% final exam

**Exam format:** Each consists of 24-27 questions from which student must select 8-20 to be answered in sentence or short paragraph. Study guide provided containing all previously asked questions.

### PSY 5960 TOPICS IN PSYCHOLOGY

(Sec 1) prereq 1001, #, 4 cr

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Instructor: ACKERMAN P

Dist Req: none

A survey of the history, methods and content of modern psychological theory, research and application. Schools of psychology (e.g., structuralism, functionalism, behaviorism, gestalt psychology) and central theories of psychology will be reviewed in their historical and philosophical context. The course will critically examine historically significant approaches to the central issues in psychology, drawing upon substantive and methodological literatures in the field. Topics include the theoretical underpinnings and classic empirical research, starting with early modern psychologists and systems of psychology; the origins of specialty areas in psychology; and issues that remain of central importance to current disciplines in psychology (e.g., learning, thinking, volitional behavior, traits, consciousness, perception). This course will provide the theoretical foundations for the broad history of psychology, and the nature of inquiry as the science developed out of philosophy and physiology, in a way that provides an integrative view of what has become a much-fractionated field of inquiry.

**Class time:** 86% lecture, 14% discussion

**Workload:** 100 pages of reading per week, 1 exam, 2 papers, 1 presentation

**Grade:** 50% final exam, 35% written reports/papers, 15% in-class presentations

**Exam format:** mostly essay and short answer

## RHETORIC

### RHET 1101 WRITING TO INFORM AND PERSUADE

(Sec 1-6) §Comp 1011, 4 cr

Instructor: STAFF

Dist Req: none

This course serves as the first in a sequence of writing courses (Rhet 1101, 1151, 3562). Students usually write four to five information and persuasive papers, have conferences and workshops on drafts of these papers, have some options for revision, and review the papers of other students. Reading might include textbook assignments, other students' papers, and examples from published authors. Some library work or research might be required. Some sections of the course are taught in a computer classroom setting. Class sizes average 21 students per section. The course is taught by both teaching assistants and regular Rhetoric faculty, and teaching approach will vary.

**Class time:** 20% lecture, 40% discussion, 40% laboratory

**Workload:** 20 pages of reading per week, 5 papers

**Grade:** 80% written reports/papers, 20% class participation

**Exam format:**

### RHET 1200 INFORMATION TECHNOLOGY IN SCIENTIFIC AND TECHNICAL PROFESSIONS

(Sec 1) prereq College of Agriculture undergrad, 3 cr

Instructor: JORN L

Dist Req: none

The purpose of this course is to provide you with problem solving skills. You will learn to plan, structure, edit, format, and produce reports. Specifically, you will learn the main functions of: word processing, telecommunications, database, spreadsheet, and chart-

ing applications. The course emphasizes how to integrate these tools within the context of science and technology. The course also promotes collaborative work. By becoming familiar with information technology and strategies to use when working with others, this course will help you meet the demands of your educational and professional careers. The course will be structured as a discussion and group work laboratory. It is important that you attend class. Much of your learning will consist of hands-on experience at the computer along with short in-class discussions and demonstrations. You will complete one group project using computers.

**Class time:** 33% lecture, 33% discussion, 33% demo software and in-class computer work

**Workload:** 30 pages of reading per week, 1 paper, 5 quizzes; 4 assignments that vary from 4-11 hours each on computer; paper is group work

**Grade:** 40% special projects, 20% quizzes, 10% class participation, 20% problem solving, 10% electronic-mail usage

**Exam format:**

### RHET 1222 PUBLIC SPEAKING

(Sec 8) prereq completion of freshman communication requirement, 4 cr

Instructor: BENNETT J

Dist Req: none

The purpose of this course is to teach you the fundamental concepts and practices of successful speaking in public situations. When you complete this course you will be able to conceptualize, formulate, and deliver an intelligent speech intended to persuade, or inform, or instruct your audience. The usual "stumbling blocks" of disorganization, lack of ideas, and terror will be sharply diminished. Text: Lucas, S.E., 'The Art of Public Speaking', supplemental text: Bennett, J.M. 'The Four Powers of Communication'. During the course of the class you will prepare and deliver ten speeches and/or presentations: 3 persuasive speeches, one demo/info/how-to speech, two oral interpretations, "My Most Embarrassing Moment" speech, speech of introduction, speech of announcement, speech of introduction of another party. The point total for speeches is 600. Also 50 points will be calculated by the professor under the category of Class Grade, which will include punctuality and timeliness of speech delivery and class participation. Attendance is worth 100 points. The outside evaluation assignment is worth 50 points, and the quiz (textbook) score is worth 200 points. Attendance and punctuality in any speech class are mandatory.

**Class time:** 50% lecture, 50% student speeches

**Workload:** 100 pages of reading per week, 6 speeches, 4 brief presentations, readings during first 5 weeks

**Grade:** 20% quizzes, 70% in-class presentations, 10% class participation

**Exam format:** multiple choice

### RHET 1303 HUMANITIES: MODERN THOUGHT AND THE IMPACT OF EVOLUTION

(Sec 1) 4 cr

Instructor: MARCHAND W

Dist Req: (IT: CD)

An introductory course tracing the impact of evolutionary theory on our social life beginning with the Greeks up to the present.

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Emphasis on the attempts of various groups, e.g. Christian fundamentalists and Sociobiologists, to build cultural theories around Darwinian theory. The course readings begin with Plato's "Cave Parable" and end with an account of the WWII death camps, "The Survivor". The course has very little biology and great deal of cultural theory. The course method is built around class discussions focused on a short class lecture each day. An "intellectual journal" is the major class requirement. Some short essay writing and take-home quizzes are also part of the class assignment.

**Class time:** 30% lecture, 70% discussion

**Workload:** 3 exams, intellectual journal

**Grade:** 20% written reports/papers, 20% quizzes, 20% class participation, 40% intellectual journal

**Exam format:** essay, take-home quizzes

### **RHET 1376 SPECIAL TOPICS IN HUMANITIES: RURAL AND URBAN IMAGES IN FILM**

(Sec 1) 4 cr

Instructor: MONTGOMERY P

Dist Req: (IT: D)

An examination of life in urban and rural America as depicted in motion pictures. How films have contributed to our perceptions of country and city life and values. Some examples of the theme in literature, from classical Greece to the present, in many of which rural innocence is contrasted with urban decadence. Films to be screened and/or discussed include short silent works by D.W. Griffith, Charlie Chaplin, and Buster Keaton; silent dramas, including F.W. Murnau's "Sunrise"; social dramas of the 30's and 40's, such as "The Grapes of Wrath" and "The Southerner"; post WWII back to earth films like "The Egg and I" and rural comedies such as the Ma and Pa Kettle series, based on characters in that film; sanitized but marginally more sophisticated portraits of rural life (three versions of "State Fair") and romanticized views of small-town American (the Andy Hardy series); films, including counter-culture films, where the theme of rural innocence vs. urban decadence is reversed, such as "Easy Rider" and "Deliverance"; television series that have continued the most simple of the city mouse/country mouse motifs (The Beverly Hillbillies, Green Acres, The Waltons, Little House on the Prairie) and movies "The River" and "Country".

**Class time:** 20% lecture, 20% discussion, 60% film screenings

**Workload:** 50 pages of reading per week, 2 exams, 2 papers

**Grade:** 20% mid-quarter exam(s), 20% final exam, 40% written reports/papers, 20% class participation

**Exam format:** essay, short answer, multiple choice

### **RHET 1441 COLLEGE READING AND LEARNING SKILLS**

(Sec 1) 4 cr

Instructor: BENNETT J

Dist Req: none

Lecture and individual and small group practice in developing: speed, comprehension, retention and flexibility in reading college assignments; clarity and precision in written expression; accurate and effective listening; control of communication-related anxiety, including test-taking; vocabulary power.

**Class time:** 70% lecture, 10% discussion, 20%

**Workload:** 40 pages of reading per week, 1 exam, 3 papers

**Grade:** 13% mid-quarter exam(s), 13% final exam, 25% written reports/papers, 12% quizzes, 12% class participation, 25% reading assignments

**Exam format:** multiple choice

### **RHET 3101 FUNCTIONAL PHOTOGRAPHY**

(Sec 1) prereq Dsgn 1501 or Rhet 3562, 4 cr

Instructor: BRENEMAN D

Dist Req: none

Basic course in photography and photographic communication. All assignments are done on color slide film. Students must provide their own adjustable camera and slide film. Film and processing costs for the quarter are about \$100.00. Students do 3 photo assignments and produce a slide set during the quarter.

**Class time:** 70% lecture, 30% laboratory

**Workload:** 50 pages of reading per week, 2 exams, 3 photo projects

**Grade:** 50% special projects, 50% quizzes

**Exam format:** multiple choice and short answer or short essay

### **RHET 3395 IN SEARCH OF NATURE**

(Sec 1) 4 cr

Instructor: MARCHAND W

Dist Req: none

The class is an interdisciplinary course designed to introduce students to contemporary American attitudes toward nature and to these attitudes as products of our history. Lectures are designed, reading materials chosen, and class assignments used to give students a broad historical overview of the subject as well as an intensified concentration on the present. The course is a new course taught for the first time in 1992. It draws students from both Mpls and St Paul campuses. Two major themes are at the core of the course. The first: there is a tendency for Western people to separate themselves from nature creating the familiar "subject/object" split which bedevils so much of our modern attitudes toward how we see nature. The second: there is a tendency for representative types, e.g. men and women, professors and farmers, wilderness advocates and forest managers etc. to view nature through their particular lens and use it for their particular needs.

**Class time:** 30% lecture, 70% discussion

**Workload:** 3 exams, 2 papers, intellectual journal

**Grade:** 20% written reports/papers, 20% quizzes, 20% class participation, 40% intellectual journal

**Exam format:** mixed - essay is usual, take-home quizzes

### **RHET 3562 WRITING IN YOUR PROFESSION**

(Sec 4) prereq completion of freshman communication requirement, 1151, jr or sr, 4 cr

Instructor: FERGUSON R

Dist Req: none

Projects in writing professional reports. Analyses of audience and situation; writing effectively to meet the needs of particular readers. Assignments include writing instructions, feasibility reports, proposals, memoranda, technical description, etc. Course includes a unit on preparing personal resumes and writing application letters.

**Class time:** 10% lecture, 60% discussion, 30% laboratory

**Workload:** 50 pages of reading per week, 5 exams, 7 papers

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**Grade:** 60% written reports/papers, 10% quizzes, 30% problem solving

**Exam format:** short answer quiz

### **RHET 3565 WRITING FOR PUBLICATION**

(Sec 1) prereq 3562, #, 4 cr

**Instructor:** SPERBECK J

**Dist Req:** none

Writing for the lay public - through newspapers, magazines, trade press, newsletters. Hybrid between a journalistic basic reporting course and a magazine writing course. Students submit at least 1 story to a publication of their choosing, with instructor's approval.

**Objective:** get the story published - for extra credit in the course. **Non-fiction writing:** text: Finsser, 'On Writing Well', Enrollment limited to 20 - minimal computer keyboarding skills helpful.

**Class time:** 20% lecture, 20% discussion, 60% laboratory, In-class writing assignments with computers

**Workload:** 20 pages of reading per week, 2 papers

**Grade:** 30% written reports/papers, 60% lab work, 10% class participation

**Exam format:**

### **RHET 5100 TECHNICAL COMMUNICATION: SPECIAL PROBLEMS**

(Sec 2) prereq #, Δ, ar cr

**Instructor(s):** MCDOWELL E, WHARTON W

**Dist Req:** none

This is an independent study course. Student contacts a teacher in the Department of Rhetoric and if the teacher agrees to work with the student, the student develops a proposal and completes the work for 1-4 credits. Generally, the student and teacher meet 1 hour each week.

**Class time:** 100% didactic communication

**Workload:**

**Grade:** determined by student

**Exam format:**

### **RHET 5258 INTERVIEWING: DYNAMICS OF FACE-TO-FACE COMMUNICATION**

(Sec 1) 4 cr

**Instructor:** MCDOWELL E

**Dist Req:** none

See course description in College of Agriculture Bulletin. I cover information gathering, employment, appraisal, counseling, exit and persuasive interviewing. Discussion and role-playing are the teaching methods. Text: 'Interview Practices for Technical Writers', Earl E. McDowell.

**Class time:** 30% lecture, 50% discussion, 20% laboratory

**Workload:** 50 pages of reading per week, 1 exam, 3 papers

**Grade:** 30% written reports/papers, 15% class participation, 55% student develops a contract so this is determined by student

**Exam format:** essay

**Instructor:** STAFF

**Dist Req:** none

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.

**Class time:** 30% lecture, 70% instructor guided oral exercises

**Workload:** 20 pages of reading per week, 4 exams

**Grade:** 25% final exam, 70% quizzes, 5% oral exam

**Exam format:** fill in the blanks, translation

### **RUSS 3101 THIRD-YEAR RUSSIAN**

(Sec 2) prereq 1106, 4 cr

**Instructor(s):** SCHWEIKERT M, MAYO A

**Dist Req:** none

Textbooks: Pulkina, "Russian (A Practical Grammar w/Exercises)". A packet with various reading materials. General objectives: reviewing the verb system. Emphasis on improving the r basic skills: reading, writing, speaking, and understanding. Required of students: oral work - includes discussion of current events and reading materials. Compositions: topics are based either on selected readings or free topics. The oral presentation at the end of the quarter counts toward the final grade. The class is conducted mostly in Russian.

**Class time:** 20% lecture, 50% discussion, 30% grammar exercises

**Workload:** 20 pages of reading per week, 2 exams, 3 papers, 1 oral presentation

**Grade:** 25% mid-quarter exam(s), 30% final exam, 25% written reports/papers, 20% class participation

**Exam format:** answering questions (in Russian), short essay, translation, fill in the blanks

### **RUSS 3111 FOURTH-YEAR RUSSIAN**

(Sec 1) prereq 3103, 4 cr

**Instructor:** WALTER R

**Dist Req:** none

The fourth-year Russian course exposes students to a variety of authentic printed materials which are discussed in class with an eye to the development of the students' oral proficiency. Materials are taken mostly from the contemporary Russian language press and include a broad range of topics. Individual students are encouraged to select and discuss materials of specific interest to them personally. Essays on topics arising from the required readings are regularly assigned. The class is conducted entirely in Russian.

**Class time:** 20% lecture, 80% discussion

**Workload:** 10 pages of reading per week, 2 exams

**Grade:** 25% final exam, 25% quizzes, 40% class participation, 10% problem solving

**Exam format:** essay

### **RUSS 3421 LITERATURE: MIDDLE AGES-DOSTOEVSKY IN TRANSLATION**

(Sec 1) §5421, 4 cr

## **RUSSIAN**

### **RUSS 1101 BEGINNING RUSSIAN**

(Sec 1-6) 5 cr

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Instructor: JAHN G

Dist Req: (CLA: D) (IT: D) (CSOM: D)

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 lectures 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 contribution to class discussion, and on the quality of the term paper. The term paper is optional for those enrolled in Russ 3421 and required of those enrolled in Russ 5421.

**Class time:** 30% lecture, 70% discussion

**Workload:** 200 pages of reading per week, 2 exams

**Grade:** 25% mid-quarter exam(s), 50% final exam, 25% class participation

**Exam format:** mixed

### **RUSS 5421 LITERATURE: MIDDLE AGES-DOSTOEVSKY IN TRANSLATION**

(Sec 1) §3421, 4 cr

Instructor: JAHN G

Dist Req: none

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 lectures 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 contribution to class discussion, and on the quality of the term paper. The term paper is optional for those enrolled in Russ 3421 and required of those enrolled in Russ 5421.

**Class time:** 30% lecture, 70% discussion

**Workload:** 200 pages of reading per week, 2 exams, 1 paper

**Grade:** 20% mid-quarter exam(s), 50% final exam, 15% written reports/papers, 15% class participation

**Exam format:** mixed

### **RUSS 5601 TRANSLATING FICTION FROM RUSSIAN TO ENGLISH**

(Sec 1) prereq at least 3 yrs of college level Russ, #, 4 cr

Instructor: CORTEN I

Dist Req: none

This course aims to teach the adv. student of Russian to distinguish and appreciate a variety of Russian literary styles from the beginning of the 19th century to the present, through "hands-on" experience of translation. Students will work with selected texts written by well-known Russian authors. Class time will be devoted to examining the stylistic features and cultural context of these writings and guiding students in translating them into good literary English. Some theoretical aspects of literary translation will also be considered. Students will be expected to prepare each assignment carefully and to participate actively in class discussions. In addition, several longer translations, on which students will work outside of class, will have to be submitted. It is not the purpose of this course to increase ability to write or speak Russian (it is assumed that a certain level of proficiency in these areas has been attained in earlier courses). The instructor will speak Russian as much as is practicable and students are encouraged to respond, but English will be used in substantive discussions of literary style, translation methodology and other related issues in order to ensure proper understanding of these important questions.

**Class time:** 20% lecture, 80% discussion

**Workload:** 3 long translations and 6 short ones (50 pages total)

**Grade:** 25% class participation, 75% problem solving

**Exam format:**

## **SANSKRIT**

### **SKT 5131 BEGINNING SANSKRIT**

(Sec 1) 5 cr

Instructor: MALANDRA W

Dist Req: none

The course is an introduction to the classical language of ancient India. Sanskrit is the basic language of Hinduism and Mahayana Buddhism, and also is the medium for a vast literature embracing the art and sciences of ancient India. Sanskrit would be of special interest to students in comparative studies of religion, literature and Indo-European linguistics. The textbook used was written for American college students without previous knowledge of a classical language. Since Sanskrit is a "dead" language, the main emphasis of the course is on reading. Classes are small with individual attention to students and are taught by the professor, not a TA.

**Class time:** interactive language learning; some lecturing

**Workload:** 5-6 lessons are covered during the 1st quarter

**Grade:** 25% mid-quarter exam(s), 50% final exam, 25% lesson assignments, quizzes, class participation

**Exam format:** written: translations, grammatical forms

## **SCANDINAVIAN**

### **SCAN 3503 SCANDINAVIAN FOLKLORE**

(Sec 1) 4 cr

Instructor: GRIMSTAD K

Dist Req: (CLA: D) (IT: D) (CSOM: D)

The course focuses on folk tales and legends as literature. We look at form and content in these genres and survey several theoretical

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approaches to the material, attempting among other things to discover a worldview expressed in the tales.

**Class time:** 50% lecture, 50% discussion

**Workload:** 50 pages of reading per week, 3 papers

**Grade:** 100% written reports/papers

**Exam format:**

## SCIENCE IN AGRICULTURE

### SCAG 1001 ORIENTATION TO SCIENCE IN AGRICULTURE

(Sec 1) 1 cr

**Instructor:** HUNTER A !!College of Agriculture Distinguished Teacher!!

**Dist Req:** none

Introduction to what science is all about and what is needed to have a career in science. Students will take a historical tour of the St. Paul Campus high-lighting the scientists and their findings. Students will interview faculty and outside resource people as to what their scientific career is all about. Course is writing intensive requiring weekly reports and a final term paper on various issues and aspects of science.

**Class time:** 100% discussion

**Workload:** 30 pages of reading per week, 1/2 paper/wk; 9 assignments are written and require a report

**Grade:** 85% written reports/papers, 15% class participation

**Exam format:** only assignments (essay)

### SCAG 5009 UNDERGRADUATE SENIOR THESIS: SCIENCE IN AGRICULTURE

(Sec 1) not for grad credit; prereq #, 1-5 cr

**Instructor:** HUNTER A !!College of Agriculture Distinguished Teacher!!

**Dist Req:** none

Students entering their final four to five quarters in residence should begin identifying a thesis topic and a faculty research mentor. Selection of a topic is the responsibility of the student in consultation with her/his academic advisor. The Science in Agriculture Coordinator should be informed as the student begins the process of identifying a thesis topic and research mentor. A topic must be selected for which there is a suitable mentor who is willing to advise the student. In most cases the mentor will be someone within the College of Agriculture but it may be a faculty member in another college provided that person agrees to work within the standards and procedural framework of ScAg 5009. Students must provide regular progress reports to their research mentors, academic advisors and to the ScAg 5009 Instructor throughout the thesis process. For each credit of ScAg 5009, students are expected to work 30-35 hrs/qtr. Students in the early phase of their thesis (problem/mentor identification, proposal development) may choose to register for 1-3 credits of ScAg 5009. That equates to 30-105 hrs of effort during the quarter.

**Class time:** 100% laboratory

**Workload:** 30-35 hr/credit/quarter

**Grade:** 100% final thesis

**Exam format:** quality of research work

## SLAVIC

### SLAV 5900 TOPICS IN RUSSIAN AND EAST EUROPEAN STUDIES: MODERN RUSSIAN SHORT STORY

(Sec 1) max 12 cr, 4 cr

**Instructor:** MAYO A

**Dist Req:** none

This course provides an account of the Russian short story from the beginning of the 20th Century through 1939. Readings will be chosen from works by Sologub and Brusov (symbolist writers), as well as from those by Chekov, Bunin through Olesha and Pilnyak. Lecture and discussion formatted classes will be conducted in English in order to help students to understand the writings of individual authors. Use of Russian language skills, however, will be welcomed. Although assigned readings will be handed out in class, you are encouraged to supplement these by using "Russian Literature Since the Revolution," by E. Brown, and "Handbook of Russian Literature," edited by V. Terras. Course grade is to be based on a midterm exam, a final paper, and class discussion.

**Class time:** 30% lecture, 70% discussion

**Workload:** 170 pages of reading per week, 1 exam, 1 paper

**Grade:** 30% mid-quarter exam(s), 30% written reports/papers, 40% class participation

**Exam format:** essay

## SOCIOLOGY

### SOC 1001 INTRODUCTION TO SOCIOLOGY

(Sec 1-3) 4 cr

**Instructor:** STAFF

**Dist Req:** (CLA: C) (IT: C) (CSOM: C)

The course provides the student with an introduction to the discipline of sociology. After reviewing the history of sociology, its methodology and major theories, students examine such basic concepts as deviance, social structure, culture, socialization and stratification. Other topics covered include gender, race relations, formal organizations, small groups, the urban community, and technology and social change. The course also examines the family, polity, economy, law, religion, and health care from a sociological perspective. Most classes are lecture format with some opportunity for class discussion. On occasion there will be films and video presentations and guest lecturers. The choice of text and readings is at the discretion of the instructor.

**Class time:** 90% lecture, 10% discussion

**Workload:** 60 pages of reading per week, 3 exams, 1 paper

**Grade:** 50% mid-quarter exam(s), 25% final exam, 25% written reports/papers

**Exam format:** multiple choice, some short answer essay

### SOC 3201 PRINCIPLES OF SOCIAL PSYCHOLOGY

(Sec 1-4) prereq 1001, 5 cr

**Instructor:** SPITZER S

**Dist Req:** (CLA: C) (IT: C) (CSOM: C)

Overview of theories and research in social psychology, with emphasis on relationships between the individual and society. Includes examination of socialization and development processes,

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identity formation, attitude formation and change, group dynamics, and interaction processes. Topics such as intergroup relations, interpersonal attraction, gender roles and sexuality, are also covered. Weekly class sessions are primarily of the lecture type, but with provision for class discussion, film and video showings, computer game simulations, sample instrument administration and familiarization, and demonstrations of various types. Laboratory sessions are more directly interactive and directed toward the execution of four small scale studies and development of skills for writing research reports. Text: VanderZanden, "Social Psychology" (4th ed) Random House, 1987 will probably be used.

**Class time:** 50% lecture, 5% closed-circuit TV, 10% discussion, 30% laboratory, 5% demonstrations

**Workload:** 60 pages of reading per week, 2 exams, 4 papers

**Grade:** 25% mid-quarter exam(s), 35% final exam, 5% quizzes, 5% problem solving, 30% lab work includes written reports or papers

**Exam format:** multiple choice

### SOC 3481 MODERN JAPANESE SOCIETY

(Sec 1) §EAS 3481; prereq introductory sociology or #, 4 cr

Instructor: BROADBENT J

Dist Req: (CLA: C) (IT: C) (CSOM: C)

This course introduces students to the social aspects of modern Japanese society that underlie its astounding economic success. It will cover both the major institutions and their foundations in the formation of the personality and the basic forms of social relationships. We start with a brief historical overview, then move to the basic values expressed in religion and art. Then we look at social relations and the self, as they develop in the family. Successively, we consider how these play out in education, work, politics, the status of women, discrimination problems, social movements and Japan's internationalization. The course reader draws from major new works in the field. A research paper is required.

**Class time:** 60% lecture, 40% discussion

**Workload:** 60 pages of reading per week, 2 exams, 1 paper

**Grade:** 30% mid-quarter exam(s), 20% final exam, 40% written reports/papers, 10% class participation

**Exam format:** take-home essay questions

### SOC 3524 AMERICA'S SEXUAL CRISIS

(Sec 1) 4 cr

Instructor: REISS I

Dist Req: none

The basic aim of the course is to increase the awareness of the student regarding the causes of our country's very high rate of sexual problems such as AIDS, rape, teenage pregnancy and sexual abuse of children. The sort of changes needed in our society to lower these rates are spelled out. Comparisons with other countries are made. Awareness of our society's restraints are moving in directions that will help resolve these problems are documented. Reasoning and evidence is covered on all topics.

**Class time:** 80% lecture, 20% discussion

**Workload:** 50 pages of reading per week, 3 exams

**Grade:** 66% mid-quarter exam(s), 33% final exam

**Exam format:** multiple choice, about 55 questions on each of the three exams

### SOC 3811 COMPUTER USAGE FOR SOCIAL STATISTICS

(Sec 1) §3801 rec, 1 cr

Instructor: STAFF

Dist Req: none

Designed to complement Soc 3801 (Descriptive Statistics). Learn how to generate statistics using SPSS and interpret output. Also learn basic computer skills and some word-processing skills (if time allows).

**Class time:** 10% lecture, 90% laboratory

**Workload:** 10 pages of reading per week, 4-5 computer assignments

**Grade:** 100% computer assignments

**Exam format:**

### SOC 5102 CRIMINOLOGY

(Sec 1) prereq 3101, 3102 or #, 4 cr

Instructor: KRUTTSCHNITT C

Dist Req: none

This course critically examines the major sociological theories of crime and deviance in light of what is known about the nature and extent of crime in our society and efforts to reduce crime. Building on this information, students are also introduced to some of the current debate in criminology relative to criminal career research and the etiology of offending.

**Class time:** 70% lecture, 10% closed-circuit TV, 20% discussion

**Workload:** 75 pages of reading per week, 2 exams, 1 paper

**Grade:** 25% mid-quarter exam(s), 50% final exam, 25% written reports/papers

**Exam format:** multiple choice

### SOC 5114 THE SOCIAL CONTROL OF WOMEN OFFENDERS

(Sec 1) prereq 3102 or #, 4 cr

Instructor: KRUTTSCHNITT C

Dist Req: none

Gender is the strongest predictor of involvement in crime. This course deals with the extent, causes and formal methods of controlling female criminality. The first part of the course reviews the nature and extent of female crime based on official crime statistics and self-report offending data. The second section of the course examines relevant theoretical explanations for the observed gender variations in crime: bio-psychological approaches, structural approaches and radical approaches. The third section of the course examines the treatment accorded convicted female offenders in the courts and the prison system. The fourth and final section looks at women as agents of formal social control.

**Class time:** 70% lecture, 10% closed-circuit TV, 20% discussion

**Workload:** 75 pages of reading per week, 2 exams

**Grade:** 50% mid-quarter exam(s), 50% final exam

**Exam format:** essay

### SOC 5142 JUVENILE JUSTICE LAW AND ORGANIZATION

(Sec 1) prereq 3101, 3102 or #...5161, 5162 rec, 4 cr

Instructor: MALMQUIST C

Dist Req: none

Description is in College Bulletin and no changes from that.

**Class time:** 60% lecture, 30% discussion, 10% video

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**Workload:** 70 pages of reading per week, 2 exams  
**Grade:** 30% mid-quarter exam(s), 70% final exam  
**Exam format:** multiple choice

### SOC 5705 BACKGROUND OF MODERN SOCIAL THOUGHT

(Sec 1) prereq 8 cr in social science or #, 4 cr

Instructor: MARINI M

Dist Req: none

This course will examine the origins of sociological thought during the nineteenth and early twentieth centuries. The purpose of the course is to trace the development of ideas through analysis of the work and lives of acknowledged masters of social thought: Auguste Comte, Karl Marx, Harriet Martineau, Herbert Spencer, Emile Durkheim, Georg Simmel, Max Weber, W.E.B. DuBois, Margaret Fuller, Charlotte Perkins Gilman, Thorstein Veblen, Charles Horton Cooley, George Herbert Mead, and Vilfredo Pareto. The course will examine the focus, orientation, problem choices, ideas, and contributions of these theorists, studying their work within the context of each theorist's life, historical context, and position in the social structure. The course will provide an understanding of the background of modern social thought and thereby provide a basis for understanding contemporary sociological theory and for the ongoing development of ideas.

**Class time:** 50% lecture, 50% discussion

**Workload:** 100 pages of reading per week, 2 exams, 1 paper

**Grade:** 25% mid-quarter exam(s), 25% final exam, 40% written reports/papers, 10% class participation

**Exam format:** combination of multiple choice and essay

### SOC 5855 SOCIOLOGY OF MEDICINE AND HEALTH CARE: AN INTRODUCTION TO MEDICAL SOCIOLOGY

(Sec 1) §PubH 5790; prereq jr or sr or grad student, 4 cr

Instructor: LITMAN L

Dist Req: none

An examination of the social, political, economic and behavioral aspects of health and medical care including the organization and delivery of health care services, their problems and perspectives. The first two-thirds of the course critically examines the nature of our health care delivery system and the evolution of third party payment i.e. insurance and government, the problems of cost and the distribution of manpower. The last third of the course is devoted to an exploration of health and illness behavior, the sick role, the doctor-patient relationship and variations in utilization and compliance behavior, focusing on the patient, the provider and the family.

**Class time:** 100% lecture

**Workload:** 100 pages of reading per week, 2 exams, 1 paper

**Grade:** 60% final exam, 40% written reports/papers, if graduate and professional degree student - final-55%, written reports or papers-45%

**Exam format:** multiple choice, short answer essay, long essay

### SOC 5966 ADVANCED PROJECT SEMINAR

(Sec 2) prereq all other required sociology coursework, Comp 3014, Δ, 4 cr

Instructor: SPITZER S

Dist Req: none

Designed to assist sociology majors in preparing research papers that satisfy the major project requirement. Provides guidance and direction in defining a research problem, collecting or selecting data, analyzing data, and writing a sociology research paper.

**Class time:** 25% lecture, 25% discussion, 50% laboratory

**Workload:** 10 pages of reading per week, 1 paper

**Grade:** 75% written reports/papers, 10% in-class presentations, 10% class participation, 5% problem solving

**Exam format:**

## SOIL SCIENCE

### SOIL 3125 BASIC SOIL SCIENCE

(Sec 1-5) §1020; prereq Chem 1001 or Chem 1004, 5 cr

Instructor: COOPER T

Dist Req: none

This is a difficult course that covers all the different aspects of soil science. It requires 5 credits worth of work. Expectations of the professor are high.

**Class time:** 60% lecture, 20% discussion, 20% laboratory

**Workload:** 3 exams, class project on land use using soil survey, takes a lot of time

**Grade:** 40% mid-quarter exam(s), 20% final exam, 10% quizzes, 20% land use project

**Exam format:** short answer (30%), multiple choice (70%)

### SOIL 5104 COMPUTER APPLICATIONS IN SOIL SCIENCE

(Sec 1) prereq 1020/3125 or equiv, #, 2 cr

Instructor: ROBERT P

Dist Req: none

This course will provide an introduction to the use of computer software such as spreadsheet, relational database, geographic information system (GIS), expert system and simulation model through practical problem solving modules applied to soil, agriculture, and natural resources fields. It will examine new applications of computer to these fields such as site-specific management. Most of the class time will be spent using computers.

**Class time:** 10% lecture, 90% computer applications

**Workload:** 5 pages of reading per week, problem solving assignments

**Grade:** 25% final exam, 75% problem solving

**Exam format:** essay

### SOIL 5560 INTERPRETATION OF LAND RESOURCES

(Sec 1) prereq 5510 or #, 3 cr

Instructor: ANDERSON J !!Stanley Dagley Distinguished Teacher!!

Dist Req: none

The first 4 weeks of the course are spent discussing how soil surveys are made, what data are available from the surveys and how it can be used to assist in land use decisions. The last 6 weeks address how a Geographic Information System (GIS) can be used in the decision making process. Students do a project and paper where they construct and use a GIS to answer a set of land use

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questions. Specific uses evaluated include agriculture, waste treatment, forestry, and general land planning.

**Class time:** 60% lecture, 15% discussion, 25% computer GIS exercise

**Workload:** 30 pages of reading per week, 3 exams, 1 paper

**Grade:** 20% mid-quarter exam(s), 40% final exam, 20% written reports/papers, 20% special projects

**Exam format:** short answers and essay questions

### SOIL 5610 SOIL BIOLOGY

(Sec 1) prereq 1020/3125 or #, 4 cr

Instructor: GRAHAM P

Dist Req: none

The course provides an introduction to the range of microorganisms found in soil, and considers how the environment and agricultural practices influence the soil population and their activities. It reviews the role of microorganisms in the major geochemical cycles (C,N,S,P) and discusses their importance and function in biological control, pollution abatement and sustainable agricultural systems. The lectures are given from slides with essentially all slide material copied and given out to the students in advance of class. The course follows loosely the format of Paul and Clark 'Soil Microbiology and Biochemistry' but commonly provides more depth than given in that text. Several reference texts are indicated but should be considered as a reserve of information, not integral to the course. The course has a strong international component, and uses the professor's experiences in India, Colombia, Indonesia and Egypt to highlight points being made.

**Class time:** 30% lecture, 10% discussion, 60% laboratory

**Workload:** 15 pages of reading per week, 1 exam, 3 papers, project proposal, review of literature, final oral

**Grade:** 15% mid-quarter exam(s), 15% final exam, 15% written reports/papers, 40% special projects, 15% lab work

**Exam format:** minimize formal written exams, midterm is only exam and is short answer format, final is an oral exam

## SPANISH

### SPAN 1101 BEGINNING SPANISH

(Sec 1-5) 5 cr

Instructor: STAFF

Dist Req: none

This is the beginning Spanish language course and as such is designed for the student who has no previous experience with learning or speaking Spanish. Students with previous experience are encouraged to take the self-evaluative Computer Placement Test to determine their level of competence before registering for a Spanish class. A packet for taking the test is available in 34 Folwell Hall and contains a permission slip, instructions and information on evaluating the test scores. Spanish 1101 stresses basic listening, speaking, reading and writing skills, with stress on the development of communicative competence. The text "Dos Mundos", 2nd edition, includes a workbook and audio tapes. Additional reading is from Spanish language newspapers, magazines and other useful material such as menus, telephone directories, maps, etc. Grammar is covered in the homework assignments and reinforced in class with a variety of paired and small group

activities.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

### SPAN 1102 BEGINNING SPANISH

(Sec 1-6) prereq 1101, 5 cr

Instructor: STAFF

Dist Req: none

This course stresses basic listening, speaking, reading and writing skills, with stress on the development of communicative competence. It includes some cultural readings. Since there is a strong emphasis on speaking and listening, it is very important that students do not miss class. It is, therefore, the policy of the department that 6 or more unexcused absences constitute an F in the course. Missing the final exam will also result in an F in the course. Excused absences must be documented. Since all grammar is covered in the first year, a good deal of it is covered in Spanish 1102. The class moves fairly fast. To do well, students need a good knowledge of the present tense forms and of basic vocabulary. In general, students who have had one or two years of Spanish in high school will feel comfortable in this class.

**Class time:** 20% lecture, 75% discussion, 5% reading, testing, etc.

**Workload:** 5 pages of reading per week, 1 exam, 2 papers, at least 30-60 min of listening to tapes and doing workbook exercises per day (3-5 hr/wk)

**Grade:** 15% mid-quarter exam(s), 25% final exam, 5% written reports/papers, 10% special projects, 20% quizzes, 20% class participation, 5% problem solving

**Exam format:** multiple choice, essay, listening with multiple choice or true/false, reading

### SPAN 1103 BEGINNING SPANISH

(Sec 1-6) prereq 1102, 5 cr

Instructor: STAFF

Dist Req: none

This course stresses basic listening, speaking, reading and writing skills, with stress on the development of communicative competence. It includes some cultural readings. Since there is a strong emphasis on speaking and listening, it is very important that students be in class regularly. It is, therefore, the policy of the department of Spanish and Portuguese that 6 or more unexcused absences constitute an F in the course. Missing the final exam will also result in an F in the course. Excused absences must be documented. Since all Spanish grammar is covered in the first year, a good deal of it is covered in Spanish 1103. The class moves fairly fast. To do well, students need a good knowledge of present and past tense forms and of basic vocabulary. In general, students who have had two to three years of Spanish in high school will feel comfortable in this class. Spanish is spoken exclusively in class, and the ability to understand spoken Spanish at near-normal speed is important. Since the Spanish 1103 classes all use the same syllabus, quizzes and exams, this description is valid for all sections.

**Class time:** 20% lecture, 75% discussion, 5% reading, testing, etc.

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**Workload:** 10 pages of reading per week, 2 exams, 7 papers, 5-6 short quizzes, at least 1/2 to 1 hour listening to tapes and workbook exercises daily

**Grade:** 15% mid-quarter exam(s), 20% final exam, 5% written reports/papers, 10% special projects, 20% quizzes, 20% class participation, 10% problem solving, 2 in-class compositions, final project is oral interview

**Exam format:** a combination of multiple choice, essay, listening with multiple choice answers, reading with multiple choice answers

### SPAN 1104 INTERMEDIATE SPANISH

(Sec 1-9) prereq 1103 or 3 yrs high school Spanish, 5 cr

Instructor: STAFF

Dist Req: none

This course is the first one of the second year. In this course, we stress communication strategies, listening ability, writing and readings skills. The main focus of this course is communication. For this reason, daily attendance is considered to be very important so that the students can build up a good level of speaking. We also incorporate real materials for reading, materials through which cultural information is incorporated in the students' knowledge of the language and culture. As for attendance policy, we follow the policy of the department that is that 6 or more absences constitute an automatic F in the course. Excused absences must be documented. Since this is the first course of the second year, students must show a good knowledge of the material covered from 1101 to 1104 and try to produce more Spanish. Considering that after 1106 they have to test out the graduation proficiency test, communication is extensively practiced and emphasized.

**Class time:** 10% lecture, 75% discussion, 15% listening, writing and testing for comprehension and vocabulary

**Workload:** 8 pages of reading per week, 5 exams, 1 hour of listening to tapes and doing exercises on workbook and textbook.

**Grade:** 15% mid-quarter exam(s), 20% final exam, 15% quizzes, 10% in-class presentations, 15% class participation, 10% final oral interview and 15% compositions

**Exam format:** Close test to conjugate verbs; listening activities; reading and a short written part.

### SPAN 1105 INTERMEDIATE SPANISH

(Sec 1-7) prereq 1104 or 4 yrs high school Spanish, 5 cr

Instructor: STAFF

Dist Req: none

This is a communicative-based course of language study. The majority of class time is devoted to contextualized, communicative small group and large group activities. These activities are designed to maximize oral and aural skills use and incorporate grammar concepts in a meaningful context. Grammar is learned at home. A very small percentage of classtime is intended for grammar instruction. Reading skills are developed through a reader designed by the department, and writing skills are developed through workbook exercises, compositions and class activities. A great percentage of the course grade is based on participation in the class. Students will use "Nuevas Dimensiones" as their textbook.

**Class time:** 5% lecture, 30% discussion, 20% laboratory, 45% group activities

**Workload:** 30 pages of reading per week, 6 exams, 4 papers, 1 oral exam, 1 oral presentation

**Grade:** 15% mid-quarter exam(s), 20% final exam, 15% written reports/papers, 15% quizzes, 10% in-class presentations, 5% lab work, 10% class participation, 10% oral interview, lab work is workbook

**Exam format:** fill in the blank, short answer, true/false, essay

### SPAN 1106 INTERMEDIATE SPANISH

(Sec 1-7) prereq 1105 or 5 yrs high school Spanish, 5 cr

Instructor: STAFF

Dist Req: none

This course stresses intermediate listening, speaking, reading and writing skills, with stress on the development of communicative competence. It includes some cultural readings. Since there is a strong emphasis on speaking and listening, it is very important that students not miss class. It is, therefore, the policy of the department that more than a week absence (more than 3 class periods) constitute an F in the course. Missing the final exam will also result in an F in the course. Excused absences must be documented. This class is a review of previously covered grammar from 1101 through 1106. The class moves fairly fast, and to do well students need a good knowledge of verb forms and basic vocabulary and structures.

**Class time:** 20% lecture, 75% discussion, 5% reading, testing, etc.

**Workload:** 10 pages of reading per week, 2 exams, 7 papers, at least 30-60 min listening to tapes and doing workbook exercises and readings-3-5 hr/wk

**Grade:** 20% mid-quarter exam(s), 20% final exam, 15% written reports/papers, 15% quizzes, 10% in-class presentations, 20% class participation, all 1106 students required to take graduation proficiency exam to obtain a gra

**Exam format:** multiple choice, fill-in-the-blanks, sentence completion, essay

### SPAN 3005 ORAL COMMUNICATION: SPEAKING AND LISTENING

(Sec 1-4) prereq 1106 or equiv, 4 cr

Instructor: STAFF

Dist Req: none

Goals for the course focus on the structuring of communicative social encounters in the Spanish language. Students will learn strategies for communication, such as circumlocution, rhetorical devices, marking switches in the topic, echo utterances, repetition and rephrasing, register speed, interruptions, etc. Through these strategies, students will learn to initiate conversations, increase their vocabulary, and negotiate resolutions to problems. Through oral and aural activities in the classroom and at home, students will improve linguistic competency.

**Class time:** 5% lecture, 50% discussion, 15% laboratory, 30% listening activities in class (lab portion is listening alone)

**Workload:** 10 pages of reading per week, 4 exams, 1 debate plus final interview presentation

**Grade:** 25% final exam, 25% quizzes, 20% in-class presentations, 25% class participation, 5% debate

**Exam format:** true/false, essay, and oral (final is an oral interview)

**SPAN 3702 THE STRUCTURE OF SPANISH: MORPHOLOGY AND SYNTAX**

(Sec 1) prereq 3004 or #, 4 cr

Instructor: OCAMPO F

Dist Req: (CLA: A) (IT: A) (CSOM: A)

This course is an introduction to the morphology and syntax of Spanish. It contains a survey of derivational and inflectional morphology. Typical syntactic constructions are considered. The course objectives are the ability to identify the different morphological and syntactic components of Spanish, and the acquisition and manipulation of linguistic notions (such as morpheme, noun phrase, subject, subordination, coordination, etc.).

**Class time:** 60% lecture, 40% discussion**Workload:** 25 pages of reading per week, 2 exams, weekly assignments**Grade:** 30% mid-quarter exam(s), 30% final exam, 40% problem solving**Exam format:** essay**SPAN 3920 TOPICS IN SPANISH AMERICAN LITERATURE**

(Sec 2) max 12 cr; prereq 3104 or #, 4 cr

Instructor: O'CONNELL J

Dist Req: none

The topics of this course is writing by contemporary Latin American women. We will read poetry and fiction (short stories and 2 novels). Students will write frequent short papers and participate actively in class discussion. In addition to focusing on the themes and ideas of the texts we read, we will also work on developing skills of literary analysis, reading, writing and speaking in Spanish.

**Class time:** 40% lecture, 60% discussion**Workload:** expect to put in at least 3 hours for every class hour**Grade:** 80% written reports/papers, 20% class participation**Exam format:****SPAN 3920H TOPICS IN SPANISH AMERICAN LITERATURE**

(Sec 81) max 12 cr; prereq 3104 or #, 4 cr

Instructor: O'CONNELL J

Dist Req: none

The topic of this course is writing by contemporary Latin American women. We will read poetry and fiction (short stories and 2 novels). Students will write frequent short papers and participate actively in class discussion. In addition to focusing on the themes and ideas of the texts we read, we will also work on developing skills of literary analysis, reading, writing and speaking in Spanish. Honors students will be required to make a class presentation on one of the authors or topics studied in class. Topics and research methods will be developed in consultation with the instructor. Group work is encouraged.

**Class time:****Workload:****Grade:****Exam format:****SPAN 5528 POPULAR LITERARY CONSCIOUSNESS 1900-1950**

(Sec 1) prereq three 3xxx or 5xxx Span or Port lit courses or Δ, 4 cr

Instructor: O'CONNELL J

Dist Req: none

Spanish-American literature between the eve and aftermath of the two world wars. Impact of modernization, industrialization, and nationalistic and populist thought on the emergence of distinctive writing, thematic trends, and literary genre conventions. Course taught in Spanish. Undergraduates admitted with permission of instructor.

**Class time:** 30% lecture, 50% discussion, 20% small groups, in-class writing**Workload:** 1 paper, weekly short reaction papers (journal); reading varies widely but all in Spanish**Grade:** 80% written reports/papers, 20% class participation**Exam format:****SPAN 5713 THE STRUCTURE OF MODERN SPANISH: SYNTAX**

(Sec 1) prereq 3702, Ling 5201 or #, 4 cr

Instructor: OCAMPO F

Dist Req: none

The course provides an introduction to linguistic phenomena that is present in the syntax of Spanish, such as: aristotelic and prototypic categories, grammatical relations, word order, transitivity, coordination, subordination, clitics.

**Class time:** 60% lecture, 40% discussion**Workload:** 30 pages of reading per week, 2 exams, weekly assignments**Grade:** 30% mid-quarter exam(s), 30% final exam, 40% problem solving**Exam format:** essay**SPEECH-COMMUNICATION****SPCH 1101 FUNDAMENTALS OF SPEECH-COMMUNICATION: ORAL COMMUNICATION**

(Sec 1-10) §1441, 4 cr

Instructor: STAFF

Dist Req: none

See course description. Teaching methods: discussion, lecture, self-evaluations. This is a fundamental course which teaches students the practicalities of speech-making, using the audience as a focal point. The student is expected to be able to do research as well as speak in front of a peer audience with little speech anxiety.

**Class time:** 30% lecture, 30% discussion, 40% student presentations**Workload:** 50 pages of reading per week, 3 exams, 3 papers, detailed outlines; several speeches**Grade:** 20% mid-quarter exam(s), 25% final exam, 15% written reports/papers, 50% in-class presentations, 5% class participation**Exam format:** exams may involve multiple choice, short answer and essay

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## SPCH 1102 FUNDAMENTALS OF SPEECH-COMMUNICATION: COMMUNICATION PROCESS

(Sec 1) 4 cr

Instructor: ZURAKOWSKI M

Dist Req: none

The course is an introduction to the field of Speech-Communication. It covers a broad range of topics, touching on those most central to the field. We explore the concept of communication and its nature in several contexts: 1) research and reasoning; 2) interpersonal; 3) intercultural; 4) organizational; 5) small group; 6) rhetoric and persuasion; and 7) mass media. Although it cannot provide an exhaustive account of the work in these areas, a primary goal of the course is to acquaint you with major theoretical and research trends.

**Class time:** 75% lecture, 25% discussion

**Workload:** 30 pages of reading per week, 2 exams, weekly quizzes and optional final exam

**Grade:** 66% mid-quarter exam(s), 33% quizzes, 1% class participation, optional final = 50%, all other work then = 50%

**Exam format:** multiple choice

## SPCH 1313 ANALYSIS OF ORAL ARGUMENT

(Sec 1-5) 4 cr

Instructor: STAFF

Dist Req: (CLA: A) (IT: A) (CSOM: A)

The textbook used for all sections of 1313 is John C. Reinard "Foundations of Argument: Effective Communication for Critical Thinking" Wm. C. Brown, 1991. Each section of 1313 is taught by experienced T.A.'s who make up their own syllabus, so the types of assignments, number of papers, presentations, quizzes, and exams will vary. In general, about half the grade would be based on quizzes and exams, and the type of exams are more likely to be essay type, but some may be partially or wholly objective. About 3 major assignments would involve writing papers analyzing argumentation in some speech or article. The thrust of the course is to strengthen students in the analysis of argumentation directed at them; but one oral presentation may be assigned in some sections, in which the students will be constructing and delivering an argumentative speech. Various exercises dealing with analyzing evidence, reasoning, fallacies, language role, etc. in argumentative contexts will be a part of the course usually. The course expects regular attendance and active participation.

**Class time:**

**Workload:**

**Grade:**

**Exam format:**

## SPCH 3201 INTRODUCTION TO BROADCASTING PRODUCTION

(Sec 1-4) 4 cr

Instructor: STAFF

Dist Req: none

The goal of this course is to enhance understanding of television as a communicative medium, a medium which is unique in its potential for impact in the communication of ideas. In this class you will be expected to: 1) learn the fundamental techniques of in-studio Live-On-Tape video production; 2) learn to write and produce as part of a video production team; 3) learn the communicative aspects of visual and aural aesthetics; 4) learn to write

competent critical analyses of visual media. This is NOT a vocational or technical training course. The focus of the course is on effective communication of a message using television as the medium. The projects for which you will be responsible are designed to help you develop a critical attitude toward both producing and consuming visual media messages. Required text: H. Zettl "Sight, Sound and Motion: Applied Media Aesthetics" 2nd edition.

**Class time:** 25% lecture, 25% discussion, 50% in studio television production

**Workload:** 30 pages of reading per week, 2 exams, 3 television productions

**Grade:** 15% mid-quarter exam(s), 15% final exam, 20% special projects, 10% class participation, 40% television productions

**Exam format:** short answer, multiple choice, true/false

## SPCH 3211 DETERMINANTS OF BROADCAST PROGRAMMING

(Sec 1) 4 cr

Instructor(s): RARICK D, 2 OTHERS

Dist Req: none

The course surveys the historical, organizational, economic, political and legal forces that shape the behavior and program content of electronic media in the U.S. The course focuses on historical trends, analysis of business and governmental organizations, and economic systems that affect media performance. Depending on section and instructor, one of these aspects may be highlighted more or less. In all cases, students are expected to develop critical awareness of the forces that shape electronic media content and of responsibilities of citizens, government policy makers and media workers in making media more responsive to the needs of society. Regular attendance and active participation is expected.

**Class time:** 80% lecture, 20% discussion

**Workload:** 200 pages of reading per week, 3 exams

**Grade:** 60% mid-quarter exam(s), 40% final exam

**Exam format:** depending on section and instructor, exams may be all multiple choice and true/false or a combination of short answer with multiple choice and true/false

## SPCH 3291 BROADCASTING AND NEW TELECOMMUNICATION MEDIA

(Sec 1) prereq 3211 or #, 4 cr

Instructor: RARICK D

Dist Req: none

The course examines the development and current status of selected newer telecommunication media. In the course, students should: 1) gain understanding of the relationships of technological, regulatory, political, economic and social factors as they influence the development, structure, and content of new media, and 2) develop critical standards for evaluating public policies, program content, and economic decisions in these new media. Particular emphasis is placed on current developments in cable television, satellite communication, video cassette, and telephone technologies in the USA, and their impact on U.S. society and public communication. The course does not cover forms of "electronic publishing" and teletext/videotext.

**Class time:** 40% lecture, 30% discussion, 30% student presentations

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**Workload:** 100 pages of reading per week, 2 exams, 2 papers  
**Grade:** 25% mid-quarter exam(s), 40% final exam, 35% in-class presentations, written reports included  
**Exam format:** multiple choice; true-false with some short answer

### SPCH 3402 COMMUNICATION IN RELATIONSHIPS

(Sec 1) prereq 1102, 4 cr

Instructor: OMDAHL B

Dist Req: none

The goal of this course is to examine how close relationships are developed, maintained, and dissolved. In attempting to understand close relationships, this course explores such topics as: attraction, attachment, assessment of costs and rewards, self-disclosure, and regulation of intimacy. Acquaintances, friendships, romantic relationships, and families are discussed. The course presents social scientific findings and practical applications.

**Class time:** 70% lecture, 30% discussion

**Workload:** 2 exams, 1 paper, 10 short written reactions to readings

**Grade:** 30% mid-quarter exam(s), 30% final exam, 30% written reports/papers, 10% special projects

**Exam format:** multiple choice and essay

### SPCH 3411 SMALL GROUP COMMUNICATION PROCESSES

(Sec 1-5) prereq 1101 or #, 4 cr

Instructor: STAFF

Dist Req: none

Small group communication processes is a course in cooperative and creative thinking in small task-oriented groups. The course includes planning, preparing for, and participating in small groups in private and public contexts. The course balances the experiential and the practical. Each student participates in a task-oriented, zero-history, leaderless group. The group members work together for the entire term. They alternate between task projects such as inquiring into public policy questions and the application of small group theory to their group experiences in case studies of the communication. The theory includes such topics as cohesiveness, norm development, role emergence, culture, leadership, conflict, power, gender and decision-making.

**Class time:** 10% lecture, 10% discussion, 80% 50-60% participation in task oriented group meetings. 20-30% reading and discussing group

**Workload:** 50 pages of reading per week, 3 exams, diaries of group experience, group meetings outside of regularly scheduled classes

**Grade:**

**Exam format:** essay and maybe objective questions

### SPCH 3431 THE ROLE OF PERSUASION IN THE MODERN WORLD

(Sec 1) soph standing rec, 4 cr

Instructor: STAFF

Dist Req: none

Students will depend on a rather comprehensive textbook and will need to gather examples of persuasion from contemporary and

varied sources.

**Class time:** 40% lecture, 40% discussion, 20% group or individual projects

**Workload:** 6 exams, 1 paper, 6 very short paper/exercises

**Grade:** 10% mid-quarter exam(s), 20% final exam, 30% written reports/papers, 10% special projects, 30% quizzes, 10% class participation

**Exam format:** both multiple choice and essay

### SPCH 3441 COMMUNICATING IN ORGANIZATIONS

(Sec 1) prereq 1102 or 1101 or equiv, 4 cr

Instructor: STAFF

Dist Req: none

This is an introductory course in Organizational Communication which covers message flow, communication networks, superior-subordinate communication, new communication technologies, and other special topics. It is a prerequisite for SPCH 5441, 5442, and 5443. Case studies are used to promote class discussion.

**Class time:** 75% lecture, 25% discussion

**Workload:** 50 pages of reading per week, 2 exams, 2 papers, interview and/or group presentation

**Grade:** 22% mid-quarter exam(s), 23% final exam, 37% written reports/papers, 10% in-class presentations, 8% class participation

**Exam format:** mixed objective and subjective

### SPCH 3605 PERSUASIVE SPEAKING

(Sec 1) prereq 1101, 4 cr

Instructor: STAFF

Dist Req: none

The course will stress student performance - students make speeches. Equally important is understanding of the process of communication. In this course that means the analysis of speaking - of one's own speaking and that of others.

**Class time:** 10% lecture, 40% discussion, 50% performance

**Workload:** 50 pages of reading per week, 2 exams, 4 papers, 3 speeches, at least

**Grade:** 40% written reports/papers, 40% in-class presentations, 20% all exams total

**Exam format:** essay

### SPCH 3605 PERSUASIVE SPEAKING

(Sec 2) prereq 1101, 4 cr

Instructor: STAFF

Dist Req: none

The course will stress student performance - students make speeches. Equally important is understanding of the process of communication. In this course that means the analysis of speaking - of one's own speaking and that of others.

**Class time:** 10% lecture, 40% discussion, 50% performance

**Workload:** 50 pages of reading per week, 2 exams, 4 papers, 3 speeches, at least

**Grade:** 40% written reports/papers, 40% in-class presentations, 20% all exams total

**Exam format:** essay

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## SPCH 3625 ETHICAL STANDARDS IN MODERN COMMUNICATION

(Sec 1) prereq 1101 or 1101H or #, 4 cr

Instructor: JENSEN J

Dist Req: none

The textbooks will be Richard Johannesen, "Ethics in Human Communication," 3rd ed. Waveland Press, 1990, and James Jaksa and Michael Pritchard, "Communication Ethics: Methods of Analysis," Wadsworth, 1988. Additional articles will be on reserve in Walter Library. The objectives of the course are to deepen and broaden insights into ethical issues related to interpersonal, small group, public, and mass communication; to increase ethical commitment whether as a communicator or a receiver or a critic; to analyze ethical concerns in communication designed to persuade, inform, or entertain; to study sources for ethical standards based on various philosophical, religious, political, and situational perspectives; to develop ethical guidelines for communication; to appreciate making ethical quality judgments on a continuum rather than in two-valued 'ethical' or 'unethical' categories; to strengthen one's courage in coping with the risk-taking involved in ethical decision making and communicating; to probe ethics in such areas as whistleblowing, ghostwriting, freedom of speech, secrecy, truth-telling and promising.

**Class time:** 10% lecture, 80% discussion, 10% audio-visuals

**Workload:** 75 pages of reading per week, 2 exams, 1 paper

**Grade:** 35% mid-quarter exam(s), 40% final exam, 25% written reports/papers

**Exam format:** essay

## SPCH 5110 ADVANCED TOPICS IN SPEECH-COMMUNICATION THEORY

(Sec 1) prereq 3211 or 3401 or 3601, 4 cr

Instructor: OMDAHL B

Dist Req: none

Emotions are experienced in response to a wide array of interpersonal and mass media communications. This course explores the nature of emotion, how it is behaviorally reflected, how it arises during communication, and how it affects interactions. Among the topics addressed in this course are: emotion in interpersonal and family relationships, empathic responses to others, emotional reactions to television and films, the selection of television programming to regulate emotional states, and the role of emotion in voters responses to politicians. Although the course focuses on social scientific theories and research, practical applications are examined.

**Class time:** 60% lecture, 40% discussion

**Workload:** 50 pages of reading per week, 2 exams, 1 paper, 10 written reactions to readings

**Grade:** 30% mid-quarter exam(s), 30% final exam, 30% written reports/papers, 10% special projects, special projects is written reactions to readings

**Exam format:** multiple choice, essay

## SPCH 5211 CONTEMPORARY PROBLEMS IN AMERICAN BROADCASTING

(Sec 1) prereq 3211, sr status, 4 cr

Instructor: PECK J

Dist Req: none

Examines portrayals of gender and race in contemporary televi-

sion and other popular media. Looks at historical roots of racial and sexual stereotypes and current uses in media and popular culture. Also looks at various efforts to influence TV portrayals of race, gender, ethnicity, etc. Course includes a lot of discussion and analysis of contemporary media images and messages.

**Class time:** 50% lecture, 25% discussion, 25% student presentations; films

**Workload:** 25 pages of reading per week, 2 exams, 1 paper, 2 short writing assignments; one oral presentation

**Grade:** 25% mid-quarter exam(s), 25% final exam, 40% written reports/papers, 10% in-class presentations

**Exam format:** essay exams

## SPCH 5261 COMMUNICATIVE PROCESSES OF TELEVISION

(Sec 1) prereq 3211 or #, 4 cr

Instructor: PECK J

Dist Req: none

Looks at television as a medium of communication and as an element of culture. Focuses on history of TV, production processes and industry, analyzing programming and understanding audiences. Regular viewing and analysis of selected programming is required. Course is highly oriented to student discussion.

**Class time:** 50% lecture, 25% discussion, 25% student presentations; films and videos

**Workload:** 25 pages of reading per week, 2 exams, 1 paper, one oral presentation

**Grade:** 25% mid-quarter exam(s), 25% final exam, 50% written reports/papers

**Exam format:** essay

## SPCH 5411 SMALL GROUP COMMUNICATION THEORY

(Sec 1) prereq 3411 or #, 4 cr

Instructor: BORMANNE!!CLA Distinguished Teacher Award!!

Dist Req: none

Small group communication is a course relating to the research, theory and application of information relating to communication and the dynamics of task-oriented small groups. The course consists primarily of lectures and class discussions emphasizing the speech-communication tradition of work in discussion and small group communication. Where it is relevant the course will deal with research and theory from cognate fields. The instructor will provide a day-by-day syllabus with reading lists for major topics. Students may use the bibliographies to help in the preparation of papers for the course. The reading lists are extensive and students are not expected to read all or even a majority of the items. The bibliographies are primarily an aid to independent study beyond the core materials covered in the lectures. Undergrads will write a short paper and graduate students will write two short papers. The papers will be 500 to 700 words in length and may be either: 1) book or article reviews or 2) syntheses of six or more research articles relating to some important concept in small group communication.

**Class time:** 50% lecture, 35% discussion, 15% group projects

**Workload:** 3 exams, 4 exams for grad students

**Grade:** 45% written reports/papers, 10% class participation, all exams to total 45% (comprehensive final)

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**Exam format:** objective questions 30 - 50%, short essay 25 - 30%, longer essay for the remainder

### SPCH 5421 QUANTITATIVE RESEARCH IN COMMUNICATION

(Sec 1) prereq 3401 or 5403 or #, 4 cr

Instructor: HEWES D

Dist Req: none

This course is an introduction to empirical studies in communication research. Students are introduced to the basic statistical techniques for assessing the reliability and validity of measures and simple statistical techniques for testing hypothesis. Special attention is paid to the peculiarities of communication research.

**Class time:** 80% lecture, 20% discussion

**Workload:** 30 pages of reading per week, 3 exams, 1 paper, very occasional homework

**Grade:** 50% mid-quarter exam(s), 25% final exam, 25% written reports/papers

**Exam format:** short essay

### SPCH 5611 CLASSICAL RHETORIC

(Sec 1) prereq 1101 or 1101H, 4 cr

Instructor: SCOTT R !!CLA Distinguished Teacher Award!!

Dist Req: none

We shall read classical rhetorical theory concentrating on Aristotle, Plato, and Cicero. We shall try to gain an understanding of these materials in their cultural context, however we shall be interested in assessing the relevance of that thought to our own times and to our individual lives. The course will be writing intensive. Students will be expected to write three papers for which they may compose sketches and which they may choose to revise.

**Class time:** 60% lecture, 40% discussion

**Workload:** 75 pages of reading per week

**Grade:** 10% mid-quarter exam(s), 10% final exam, 80% written reports/papers

**Exam format:** essay

## STATISTICS

### STAT 1001 INTRODUCTION TO IDEAS OF STATISTICS

(Sec 4-6) prereq high school algebra, 4 cr

Instructor: EATON M

Dist Req: (CLA: A) (CSOM: A)

This is a one quarter course. It is an introduction to the basic ideas of inferential and descriptive statistics with a prerequisite of high school algebra. The course begins with a discussion of means, variances and histograms, and then correlation-regression is covered. After discussing some elementary probability, the central limit theorem is used to justify some basic inferential methods. The course ends with an application of basic probability modeling to Mendelian genetics.

**Class time:** 90% lecture, 10% discussion

**Workload:** 50 pages of reading per week, 2 exams, 10 homework problems per week

**Grade:** 40% mid-quarter exam(s), 40% final exam, 20% problem solving

**Exam format:** multiple choice

### STAT 3091 INTRODUCTION TO PROBABILITY AND STATISTICS

(Sec 1-2) §5121, 5131; prereq differential, integral calculus, 4 cr

Instructor: PRUITT R

Dist Req: (CLA: A) (IT: A) (CSOM: A)

See catalog.

**Class time:** 75% lecture, 25% discussion

**Workload:** 2 exams, weekly homework

**Grade:** 50% mid-quarter exam(s), 40% final exam, 10% problem solving

**Exam format:** problem solving

### STAT 5021 STATISTICAL ANALYSIS

(Sec 1-2) §3012; prereq college algebra, 5 cr

Instructor: MEEDEN G

Dist Req: none

See catalog.

**Class time:** 95% lecture, 5% discussion

**Workload:** 3 exams, weekly homework

**Grade:** 45% mid-quarter exam(s), 45% final exam, 10% problem solving

**Exam format:** problems to work, old exams will be made available

### STAT 5121 THEORY OF STATISTICS

(Sec 1-2) prereq Math 1261, 5 cr

Instructor: LINDGREN B

Dist Req: none

Univariate and multivariate distributions, law of large numbers, sampling, likelihood methods, estimation and hypothesis testing, regression and analysis of variance, confidence intervals, distribution-free methods.

**Class time:** 3-1 hour lectures, 1-1 hour "recitation conducted by TA

**Workload:** 3 exams, written assignments (problem solving) weekly

**Grade:** 45% mid-quarter exam(s), 40% final exam, 15% problem solving

**Exam format:** problem solving

### STAT 5131 THEORY OF STATISTICS

(Sec 3) §5121-5122; prereq Math 3311 or 3411, 4 cr

Instructor: LINDGREN B

Dist Req: none

Probability models, univariate and bivariate distributions, independence, basic limit theorems. 5132-5133: Statistical decision theory, sampling, estimation, testing hypotheses, parametric and nonparametric procedures for one-sample and two-sample problems, regression, analysis of variance. Treatment more mathematical than that in 5121-5122.

**Class time:**

**Workload:**

**Grade:** 45% mid-quarter exam(s), 40% final exam, 15% problem solving

**Exam format:** problem solving

### STAT 5302 APPLIED REGRESSION ANALYSIS

(Sec 1-2) §5161; prereq 3012 or 5021 or 5133 or #, 5 cr

*The distribution requirement (Dist Req) information is only valid for CLA, IT and CSOM and for groups A, B, C and D.*

*Look for UCIP on the University Computer Network via Gopher*

Instructor: COOK R

Dist Req: none

This course is on applied regression methods for prediction and estimation. Graphical analysis methods are emphasized. Text: Weisberg, S. 'Applied Linear Regression,' 2nd ed. Wiley. Computing is required, but no computing background is necessary.

**Class time:** 75% lecture, 25% laboratory

**Workload:** 2 exams, 8 written assignments most involving some computing

**Grade:** 25% mid-quarter exam(s), 35% final exam, 40% written reports/papers

**Exam format:** mixture of multiple choice, fill-in-the-blank and essay

## THEATRE ARTS

### TH 1101 INTRODUCTION TO THE THEATRE

(Sec 1) 4 cr

Instructor: NOLTE C

Dist Req: (CLA: D) (IT: D) (CSOM: D)

Intro to Theatre seeks to enhance your appreciation of the various forms theatre takes in our society today: stage, film, television, radio. By the conclusion of the course, the student should feel more confidence in making value judgments on what he or she experiences as a viewer of theatre, film and TV drama. The focus of the course is on selected plays in a range of epochs and styles. An anthology of plays is designed to supplement the lecture material. There will be some emphasis on practical elements of theatre and film/TV, and some discussion of the different functions of theatre practitioners: actors, designers, directors, as well as playwrights. The course explores the theatre as a reflection of society throughout the ages, and emphasizes the influences of the various theatre artists as they mirror the times in which they lived.

**Class time:** 90% lecture, 10% discussion

**Workload:** 50 pages of reading per week, 2 exams, 2 papers

**Grade:** 25% mid-quarter exam(s), 25% final exam, 50% written reports/papers

**Exam format:** true/false, multiple choice

### TH 1101 INTRODUCTION TO THE THEATRE

(Sec 2) 4 cr

Instructor: NORWOOD J

Dist Req: (CLA: D) (IT: D) (CSOM: D)

This is a general course in theatre appreciation. The class meets in one of the theatres of Rarig Center; one component of the course is a study of different types of theatre architecture. Extensive video presentations (short clips) illustrate the major points covered in lectures. Course readings include plays in a variety of periods and styles. The focus of the course is on the living experience of theatre. Selected classes will focus on the work of the director, actor, designer, and playwright. Other classes will analyze plays ranging from classical Greek, Shakespeare, Moliere, Ibsen, Miller, O'Neill, and Williams. The course also explores multicultural theatre, with individual classes on the Eastern tradition (Japan, China, India), Afro-American theatre, and Chicano theatre. The class meets two times a week in 1:55 minute sessions. Please address any questions about the course to Professor Norwood

at 625-2878 or 625-6699.

**Class time:** 90% lecture, 10% big-screen video presentations

**Workload:** 3 exams, read approximately 1 play per week plus short articles

**Grade:** 50% mid-quarter exam(s), 25% final exam, 25% a play review project: attend a theatre production and write a three-page critique

**Exam format:** objective: short answer based primarily on lectures, multiple choice, true/false

### TH 1504 ELEMENTS OF TECHNICAL THEATRE

(Sec 1) prereq 1101 or 1, 4 cr

Instructor: EGAN K

Dist Req: (IT: D)

The course objective is to provide a fundamental introduction to the arts and crafts of the theatre. The lectures will include Theatre Architecture, Scenery, Properties, Costuming, Lighting, Make-up, Sound, and Stage Management, and are given by the University Theatre Staff of each area. The laboratory - the participation of 8 members of one technical crew on one of the University Theatre's productions, is a directed, practical application of the lectures, and is supervised and graded.

**Class time:** 100% lecture

**Workload:** 20 pages of reading per week, 2 exams, laboratory of 40-60 hours

**Grade:** 20% mid-quarter exam(s), 20% final exam, 10% quizzes, 50% lab work

**Exam format:** multiple choice, matching, fill in the blank

### TH 3321 INTERMEDIATE ACTING

(Sec 1) prereq 1326, 3311, theatre arts maj or #, 4 cr

Instructor: FREEMAN D

Dist Req: none

Intermediate acting focuses on the study of characterization. We follow the text, "Respect for Acting" by Uta Hagen and use many of her exercises. It is essential that students come into this intense course with all our prerequisites. Please see college bulletin and adhere to the order in which acting classes are to be taken. Students should be prepared for a challenging work load, with early memorization dates for all scene and monologue units. In ten weeks each student performs two scenes and two monologues, writes a 10-15 page character analysis paper, reads and discusses the text, participates in daily acting exercises and takes a written final exam. The student must come to this course ready for a challenge.

**Class time:** 15% lecture, 10% discussion, 75% rehearsal; acting exercises; performance

**Workload:** 20 pages of reading per week, 1 exam, 1 paper, performances of 2 scenes and 2 monologues

**Grade:** 10% final exam, 10% written reports/papers, 5% special projects, 5% class participation, 60% performances

**Exam format:** performance. one written final is given in an essay and short answer form.

### TH 3513 TECHNICAL THEATRE PRODUCTION I

(Sec 1) prereq 1504, 5 cr

Instructor: GWINUP M

Dist Req: none

This course is an extension of Elements of Technical Theatre

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course centering on the areas of scenery/properties design and production. It is a team taught class with the departmental scenic designer (C. Lance Brockman) teaching the design portion and the departmental technical director (Martin B. Gwinup) teaching the construction and planning portion. The course involves both lecture as well as demonstration and practical labs. The textbook is "Theatrical Design and Production" by Gillette.

**Class time:** 40% lecture, 40% laboratory, 20% demonstration/application

**Workload:** 20 pages of reading per week, 2 exams, 8 design/drafting/planning projects

**Grade:** 15% mid-quarter exam(s), 15% final exam, 40% special projects, 30% lab work

**Exam format:** true/false, matching, multiple choice, fill-in-the-blank

### TH 3711 BEGINNING STAGE DIRECTION

(Sec 1) prereq 1504, 3701, jr or sr, 4 cr

Instructor: ADEY H

Dist Req: none

Experience in TH 3513 recommended. Analysis, production planning, rehearsal techniques with plays of realism. Focus on 20th century plays for direction of scenes selected.

**Class time:** 25% lecture, 25% discussion, 25% laboratory, 25% presentations

**Workload:** 50 pages of reading per week, 2 exams, 2 papers

**Grade:** 15% mid-quarter exam(s), 15% final exam, 15% written reports/papers, 50% in-class presentations, 5% class participation

**Exam format:** true/false, multiple choice, short essay

### TH 5110 THEATRE PERFORMANCE

(Sec 1) max 9 cr; prereq written permission after casting and/or assignment to a production, 1 cr

Instructor: MONTGOMERY J

Dist Req: none

Participation in rehearsal and performance of university theatre productions. Student must be cast or working on the production in order to receive credit.

**Class time:** 100% directed by the production

**Workload:** hours or rehearsal/performance as dictated by the production

**Grade:** 100% s/n performance of the role or execution of duties

**Exam format:**

### TH 5510 DRAWING AND RENDERING FOR THEATRE DESIGNERS

(Sec 1) prereq 3513 or 3515 or grad student, #, 2 cr

Instructor(s): BROCKMAN C, EGAN K

Dist Req: none

Drawing and rendering skills for presentation of scenic and costume designs. Drawings in the fall, color renderings in Spring. Through a number of in-class assignments, skills are developed and style issues are addressed. Betty Edward's "Drawing on the Right Side of the Brain" serves as text for this class.

**Class time:** 1% lecture, 99% laboratory

**Workload:** development of research/resource morgue

**Grade:** 85% lab work, 15% development of research/resource morgue

**Exam format:** no exams

### TH 5511 THEATRE DRAFTING AND GRAPHICS

(Sec 1) prereq 3513, 3515 or equiv or #, 4 cr

Instructor(s): BROCKMAN C, 2 OTHERS

Dist Req: none

Practical study of drafting and graphic for the theatre designer (scenery and lighting) and technical director. Interpretation of rendering, sketches and model for realization on the stage. Course is team taught with lectures by University scene designer, University lighting designer and University technical director.

**Class time:** 30% lecture, 70% laboratory

**Workload:** req'd drafting due periodically

**Grade:** 100% lab work

**Exam format:** all drafting plates are graded individually

### TH 5520 SCENE DESIGN

(Sec 1) max 12 cr; prereq 3513, 5511, or #, 4 cr

Instructor: BROCKMAN C

Dist Req: none

The scene design course is established to provide students with information and projects that stimulate solutions to the creative problems of designing for the three-dimensional space. Emphasis is on presenting and communicating design ideas and free students from traditional scenic approaches.

**Class time:** 10% lecture, 90% laboratory

**Workload:** 2 complete design projects

**Grade:** 100% special projects

**Exam format:**

### TH 5532 ADVANCED MAKEUP FOR THE STAGE

(Sec 1) prereq 1502 or equiv or grad stu, 2 cr

Instructor: EGAN K

Dist Req: none

Prereq TH1502; Make up for the Actor, and a clean shaven face. Building on the stage make-up skills learned in 1502, the class will work on advanced painting and sculpting techniques including casting the face and building prosthetics and moustache and wig ventilation. The class will be graded on the execution of 8-10 make-up assignments. The class is structured for individualized instruction in a laboratory situation. Some guest artists will be used.

**Class time:** 75% laboratory, 25% lecture/demonstration

**Workload:** 10 pages of reading per week, development of research morgue

**Grade:** 30% special projects, 60% lab work, 10% class participation

**Exam format:** execution of assignments

### TH 5712 ADVANCED STAGE DIRECTION

(Sec 1) prereq 3711 or 5711, 4 cr

Instructor: ADEY H

Dist Req: none

Theory of rehearsal and production problems and direction of two one-act plays. Study of dramatic writing forms - farce, melodrama, comedy of manners, verse, epic, absurd, as variants from realism and the method of acting through Stanislavsky theory.

*The distribution requirement (Dist Req) information is only valid for CLA, IT and CSOM and for groups A, B, C and D.*

*Look for UCIP on the University Computer Network via Gopher*

Plays are selected for contrast/challenge.

**Class time:** 25% lecture, 25% discussion, 50% presentations/discussion

**Workload:** 2 papers, rehearsal time approximately 30-40 hours

**Grade:** 25% written reports/papers, 10% special projects, 50% in-class presentations, 15% class participation

**Exam format:** essay - oral on 2 projects

### TH 5716 STAGE MANAGEMENT FOR THE THEATRE

(Sec 1) prereq 3701 or ¶ or grad stu, 4 cr

Instructor: MONTGOMERY J

Dist Req: none

Practical and theoretical aspects of stage management. Course can be taken either as a "theory" course or a "hands-on" laboratory. Most students have found the latter more beneficial. Course is taught only fall quarters - always MW 3:35-5:30. If student elects the "hands-on" laboratory, he/she seeks a stage management position with a university theatre production and works with director, actors, and designers to produce the play. Course itself includes lectures, text recommended, and discussion sessions on practical experience. Course requirements vary according to A) theory or B) practical.

**Class time:** 75% lecture, 25% discussion, laboratory is above the in-class time

**Workload:** (A) promptbook log (B) attendance at rehearsals, meetings, and performances

**Grade:** A) final 33%, paper/projects 67%; B) 25% each for papers/projects, 50% performance in lab.

**Exam format:** multiple choice, essay

### TH 5720 PLAYS IN PRODUCTION AND PERFORMANCE

(Sec 1) max 6 cr for undergrads; prereq 5712, #, written permission, 2-4 cr

Instructor: STAFF

Dist Req: none

Work on campus or with a community, high school, touring, or professional theatre group for experience in stage direction.

**Class time:** varies

**Workload:** 2 papers, reading varies; final summation/possible journal/diary; research, meetings, rehearsals, visuals

**Grade:**

**Exam format:** varies-committee final oral, oral and presentation with advisor

### TH 5760 ADVANCED STAGE MANAGEMENT

(Sec 1) max 6 cr for undergrads; prereq 5716 or ¶, #, written permission, 1-3 cr

Instructor: MONTGOMERY J

Dist Req: none

This course deals with providing practical experience in stage management for specific productions of the university theatre. Students must have completed TH 5716 prior to enrolling in this class. Practical involvement in the laboratory of the university theatre can total 100+ hours.

**Class time:** 100% laboratory

**Workload:** attendance at rehearsals, meetings, performance

**Grade:** 25% written reports/papers, 25% special projects, 50% performance in the lab of the theatre

**Exam format:**

## WOMEN'S STUDIES

### WOST 3306 U.S. MINORITY WOMEN WRITERS

(Sec 1) prereq 8 cr WoSt or 4 cr WoSt and 4 cr lit or Amer, Black, Chicano or Native Amer studies, 4 cr

Instructor: MARQUIT D

Dist Req: (CLA: D) (IT: D) (CSOM: D)

Readings in the course will be fiction, autobiography and other creative prose, poetry, drama, and criticism by women of color in the U.S. Writing by African-American and Latina women will receive most extended attention, but Native American and Asian-American women writers will also be read. We will try to put these writers in historical perspective, looking at the traditions of the literature of each group and how these writers draw on and react to these traditions as well as to the dominant or mainstream tradition in the U.S. The works read will be primarily contemporary. We will attempt to identify shared issues in these different literatures, as well as themes particular to each. Students will have the opportunity for intensive study of an individual author in a small group. Discussion in the class as a whole and in small groups will deepen our understanding and response and allow us to share insights; some background and suggestions will be provided in lectures.

**Class time:** 15% lecture, 85% discussion

**Workload:** 200 pages of reading per week, 2 exams, 4 papers, 1 small-group presentation in class

**Grade:** 10% mid-quarter exam(s), 25% final exam, 25% written reports/papers, 25% in-class presentations, 15% class participation

**Exam format:** essay

### WOST 5203 WOMEN, FEMINISM, AND POWER

(Sec 1) prereq 12 cr in WoSt courses or #, 4 cr

Instructor: FAUNCE P

Dist Req: none

We will explore feminist and multicultural perspectives of power; myths, stereotypes, and realities regarding women and power; old and new definitions of power; emerging forms of being and relating in society and the world that are non-abusive and non-violent; and strategies for implementation of new power forms in our own lives.

**Class time:** 10% lecture, 90% discussion

**Workload:** 200 pages of reading per week, 1 paper, 1 presentation

**Grade:** 25% written reports/papers, 25% in-class presentations, 25% class participation, 25% attendance

**Exam format:**

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**If you have a great TA this fall let us know!!** In order to recognize the important contributions teaching assistants make to the quality of undergraduate education, the CLA Student Board presents an annual award to an outstanding TA. Nomination forms can be picked up outside our office at 101 Johnston Hall.

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