



**OFFICE OF THE UNIVERSITY REGISTRAR** 

### Changes to the Environmental Horticulture minor requirements

#### **Minor Program Requirements:**

	UNITS
Environmental Horticulture	23-25
Environmental Horticulture 6 4	
Plant Biology 171	
Environmental Horticulture 105, 107, or 149 4	
Select two courses from Environmental Horticulture 125, 130, 133	
Environmental Horticulture 110 or 112 4	

### **Evolution and Ecology major**

The major program in Evolution and Ecology has changed its name to Evolution, Ecology and Biodiversity.

### Medieval Studies major

The major program in Medieval Studies has changed its name to Medieval and Early Modern Studies.

### New minor in Middle East/South Asia Studies

(Collge of Letters and Science)

The Program in Middle East/South Asia Studies takes an interdisciplinary approach to the study of this important world area. Participating faculty are drawn from a variety of departments and programs, including Anthropology, Asian American Studies, Comparative Literature, English, History, Religious Studies and Women and Gender Studies.

The minor in Middle East/South Asia Studies offers students a unique opportunity to study exchanges, complementarities, and correspondences in the region in religion, family structures, gender relations, media, literature and film, history, anthropology, law, political economy, international relations, development, diasporas, urbanism, and other themes.

#### **Minor Program Requirements:**

Middle East/South Asia Studies	20-24
Middle East and South Asian Studies 1004	
Choose one course from Anthropology 142; Comparative Litera- ture 166; History 190A, 190B, 190C, 193A, 193B; Religious	
Studies 160, 162; Women's Studies 178A, 184 4	
Choose one course from Anthropology 145; History 102Q, 196A, 196B; Geography 126; Religious Studies 168, 170; Women's Studies 178B	
Additional Electives from Core Course list (below)	
Core Course List: Anthropology 142, 145; Comparative Litera- ture 166; History 102Q, 190A, 190B, 190C, 193A, 193B, 196A, 196B; Geography 126; Middle East and South Asian Studies 180, 192, 198, 199; Religious Studies 160, 162, 168, 170; Wom-	
en's Studies 178A, 178B, 184.	

Note: With prior consultation with an adviser, students can petition the Program Committee in advance to accept other elective courses toward the minor program. Under no circumstances may more than one lower division course be offered in satisfaction of requirements for the minor.

Note: With prior consultation with an adviser, students can petition the Program Committee to accept more than four units of Middle East and South Asian Studies 192, 198, and/or 199 towards the minor program.

**Minor adviser.** Consult the Department of Anthropology, 330 Young Hall, 752-0745/0746.

# New minor in Quantitative Biology and Bioinformatics

(College of Agricultural and Environmental Sciences and College of Letters and Science)

The interdisciplinary minor in Quantitative Biology and Bioinformatics is an integrative program that introduces students to the quantitative and computational approaches that are redefining all disciplines in the biological sciences, from molecular and cell biology, through genetics and physiology, to ecology and evolutionary biology. Students in this minor will learn research tools that apply mathematical and computational methods, increase their insight into the strengths and limitations of quantitative approaches, and develop the interdisciplinary perspective that is now the foundation of modern biological research and training.

The minor in Quantitative Biology and Bioinformatics is open to all undergraduates regardless of major and is sponsored by the Division of Biological Sciences.

#### **Minor Program Requirements:**

UNITS

τ	UNITS
Quantitative Biology and Bioinformatics	18-24
Core Courses	
Programming: Computer Science Engineering 10 or 30 or the equivalent*4	
Quantitative Biology: Biological Sciences 132 or Mathematics 1244	
Bioinformatics: Computer Science Engineering 1244	
Quantitative and Computational Preparation	
Complete one course from the following: Applied Science Engi- neering 115; Computer Science Engineering 110; Mathematics 128A, 128B, 128C, 131; Statistics 130A, 131A, 141A4	
Restricted Electives	
Complete two or more courses from the following list to achieve a total of 18-24 units: Animal Genetics 120; Computer Science Engineering 122A, 165A; Environmental Science and Policy 121; Evolution and Ecology 102, 103, 104, 175; Molecular and Cellular Biology 123, 143, 182; Neurobiology, Physiology and Behavior 105, 131, 163; Wildlife, Fish and Con- servation Biology 122	
<b>Restrictions</b> : No more than two upper division courses from a	
single department/section may be offered in satisfaction of the minor requirements. Only one course used to satisfy a require- ment for the minor may be applied toward a student's major.	

<sup>\*</sup> The programming requirement may be satisfied by previous experience and therefore may not entail college course credit. Please see your minor adviser for this determination and its possible impact on your unit requirements for the minor.

**Minor adviser.** Consult the Division of Biological Sciences Dean's Office, 202 Life Sciences Addition, 752-0410.

### New major in Technocultural Studies

### A.B. Major Requirements:

UN	ITS
Preparatory Subject Matter	28
Technocultural Studies 1, 2, 4, 5, 6, 7A-E	
American Studies 1A or 5 4	
Depth Subject Matter	.44
Technocultural Studies 190, 191	
Production emphasis	
Choose five from production based Technocultural Studies	
100, 101, 103, 104, 110, 111, 112, 113, 121, 122, 123, 192 plus	
two from Technocultural Studies 120, 150, 151, 152, 153, 154,	
155, 158, 159, plus a four-unit class from another department	
or program releivant to the student's area of concentration, as	
approved by Technocultural Studies.	
Studies emphasis	
Choose two from production based Technocultural Studies 100,	
101, 103, 104, 110, 111, 112, 113, 121, 122, 123, 192 plus five	
from Technocultural Studies 120, 150, 151, 152, 153, 154, 155,	
158, 159, plus a four-unit class from another department or	
program relevant to student's area of concentration, as approved	
by Technocultural Studies.	
Technocultural Studies 1984	
Total Units for the Major	72

Major adviser. See Program Office.

### New and changed courses for 2004-2005

#### African American and African Studies (AAS)

#### 180. Race and Ethnicity in Latin America (4)

Lecture-4 hours. The social and political effects of racial and ethnic categorization in Latin America, including issues of economic production, citizenship, national belonging, and access to resources. Emphasis is on peoples of African, Indigenous, and Asian descent. GE credit: ArtHum or SocSci, Div.-II. (II.) Ng'weno

(new course-eff. winter 05)

#### Agricultural and Resource Economics (ARE)

#### 1S. Economic Basis of the Agricultural Industry (4)

Lecture—4 hours. Agriculture and man; the agricultural industry in Australia and world economies; production and supply, marketing and demand; agricultural land, capital and labor markets; economic and social problems of agriculture in an urban and industrialized economy emphasizing Australia. Taught in Australia under the supervision of a UC Davis faculty member. Not open for credit to students who have completed course 1. Not offered every year.—Alston

(new course—eff. fall 04)

#### 1205. Agricultural Policy (4)

Lecture-4 hours. Prerequisite: course 100A or consent of instructor. Analytical treatment of historical and current economic problems and governmental policies influencing agriculture. Uses of economic theory to develop historical and conceptual understanding of the economics of agriculture; how public policy influences the nature and performance of agriculture. Taught in Australia under the supervision of a UC Davis faculty member. Not open for credit to students who have completed course 120. Not offered every year.-Alston

(new course—eff. fall 04)

#### Anthropology (ANT)

#### 13. Scientific Method in Physical Anthropology (4)

Lecture-2 hours; laboratory/discussion-1 hour; fieldwork-1 hour. Skills for scientific thinking; designing, implementing, analyzing, interpreting, presenting, and criticizing research. Collection and analysis of original data. Basic statistical methods. GE credit: SocSci, Wrt.—I. (I.) McElreath, Harcourt

(new course-eff. fall 04)

**24.** Ancient Crops and People (4) Lecture—3 hours; discussion—1 hour. The archaeological evidence for domestication of plants and the origins of agricultural societies. Anthropological context of agriculture and the effects on sexual division of labor, social inequality, wealth accumulation, warfare, human health, and sedentism. Offered in alternate years. GE credit: SocSci, Div, Wrt.-(I.) Eerkens

(new course—eff. spring 05)

#### 50. Evolution and Human Nature (4)

Lecture—3 hours; discussion—1 hour. Evolutionary analyses of human nature, beginning with Lamarck, Darwin, Spencer and contemporaries, and extending through social Darwinism controversies to contemporary evolutionary anthropology research on human diversity in economic, mating, life-history, and social behavior. GE credit: SocSci, Div, Wrt.-II. (II.) Winterhalder

(new course-eff. fall 04)

#### 101. Ecology, Nature, and Society (4)

Lecture-3 hours; discussion-1 hour. Prerequisite: course 1 or 2 or Environmental Science and Policy 30 or Evolution and Ecology 100 or Biological Sciences 101. Interdisciplinary study of diversity and change in human societies, using frameworks from anthropology, evolutionary ecology, history, archaeology, psychology, and other fields. Topics include population dynamics, subsistence transitions, family organization, disease, economics, warfare, politics, and resource con-servation. (Same course as Environmental Science and Policy 101.) GE credit: SocSci, Div, Wrt.-II. (II.) Borgerhoff Mulder

(change in existing course-eff. winter 05)

#### 145. Performance, Embodiment, and Space in South Asia (4)

Lecture/discussion-4 hours. Prerequisite: course 2 or consent of instructor. South Asian cultures and societies with a focus on performance, embodiment, and space from several disciplinary fields. Topics may include colonialism, nationalism, religious traditions, media, popular culture, cities, social movements, modernity, body-cultures, identity, gender, and diasporas. GE credit: ArtHum or SocSci, Div, Wrt.—Srinivas

(new course—eff. winter 05)

#### 105. Evolution of Societies and Cultures (4)

Lecture-3 hours; discussion-1 hour. Prerequisite: course 1 or 2 or Environmental Science and Policy 30 or Evolution and Ecology 100 or Biological Sciences 101. Interdisciplinary study of social and cultural evolution in humans. Culture as a system of inheritance, psychology of cultural learning, culture as an adaptive system, evolution of maladaptations, evolution of technology and institutions, evolutionary transitions in human history, coevolution of genetic and cultural variation. Only 2 units of credit to students who have com-pleted Environmental Science and Policy 101 or course 101 prior to fall 2004. (Same course as Environmental Science and Policy 105.) GE credit: SocSci, Wrt.—III. (III.) McElreath, Richerson

(new course-eff. fall 04)

#### 182. Archaeometry (4)

Lecture—3 hours; discussion/laboratory—1 hour. Prerequisite: course 3; Statistics 13 or the equivalent recommended. Scientific techniques used to study the chemical and physical properties of archaeological materials. Types of anthropological questions that can be addressed with different methods. Preparation and analysis of archaeological materials. Offered in alternate years .--- I. Eerkens

(new course-eff. spring 05)

#### 291. Advanced Topics in Human Behavioral Ecology (4)

Discussion—3 hours; term paper. Prerequisite: course 261, 262, or 263, or comparable experience in anthropology or related disciplines and consent of instructor. Topically focused, critical discussion of current and emerging research in the field of human behavioral ecology, giving special attention to theory, concepts, models, and methods for the evolutionary analysis of ethnographic and archaeological evidence. May be repeated once for credit if topic differs.---III. Borgerhoff Mulder, McElreath, Winterhalder

(new course-eff. fall 04)

#### Art History (AHI)

#### 292. Art History Internship (2-12)

Internship—6-36 hours. Supervised internship at professional art or cultural institution including museums, galleries, archives, government offices, visual resources libraries, etc. May be repeated once for credit. Not offered every year. (S/U grading only.)

(new course-eff. fall 04)

#### **Biotechnology (BIT)**

### 171. Professionalism and Ethics in Genomics and Biotechnology (3)

Lecture—1 hour; discussion—2 hours. Prerequisite: upper division standing in a natural science major. Real and hypothetical case studies to illustrate ethical issues in genomics and biotechnology. Training and practice in difficult ethical situations and evaluating personal and social consequences.—I, II, III. (I, II, III.) Yoder, Bradford

(change in existing course-eff. winter 05)

#### Chicana/o Studies (CHI)

#### 40. Comparative Health: Leading Causes of Death (4)

Lecture—3 hours; discussion—1 hour. Introduction to the epidemiology of the leading causes of death for ethnic and racial minorities. Assessment of the disproportionate rate at which ethnic and racial minorities suffer and die prematurely from injuries and chronic and infectious diseases. GE credit: Div, Wrt.—II, III. (II, III.) Garcia

(new course-eff. winter 05)

#### 92. Internship (1-12)

Internship—3-36 hours. Prerequisite: course 10 or consent of instructor. Academic guidance combined with internship in community agencies serving Mexican/Latina/Latino/Chicana/Chicano clients. Use of bilingual skills and knowledge of history, culture, economics, politics and social issues. May be repeated for credit up to 12 units.

(new course—eff. fall 04)

### 112. Globalization, Transnational Migration, and Chicana/o and Latina/o Communities (4)

Lecture—4 hours. Prerequisite: course 10. Chicana/o and Latina/o migration experiences within a global context. Topics include national and/or transnational migration in Mexico, Central America, and the United States. GE credit: SocSci, Div, Wrt.—I, III. (I, III.) Pesquera, Flores-Ortiz, de la Torre

(new course-eff. winter 05)

#### 192. Internship in the Chicana/Chicano/Latina/Latino Community (1-12)

Internship—3-36 hours. Prerequisite: course 10, 21, or 50, Spanish 3 or the equivalent. Academic guidance combined with internship in community agencies serving Mexican/Latina/Latino/Chicana/Chicano clients. Use of bilingual skills and knowledge of history, culture, economics, politics and social issues. Internship project required. May be repeated for credit up to 12 units. (P/NP grading only.)

(change in existing course—eff. summer II 04)

#### Chinese (CHN)

#### 1A. Accelerated Intensive Elementary Chinese (15)

Lecture/discussion—15 hours. Prerequisite: placement exam. Special 12 week accelerated, intensive summer session course that combines the work of courses 1, 2, and 3. Introduction to Chinese grammar and development of all language skills in a cultural context with emphasis on communication. Not open for credit to students who have completed course 1, 2, or 3.—Liu

(new course-eff. special session 04)

#### 101. Chinese Film (4)

Lecture/discussion—3 hours; film viewing—3 hours. Prerequisite: History 9A or any course on traditional China, upper division standing. English language survey of Chinese film, from its inception to the end of the twentieth century. Chinese films as important texts for understanding national, transnational, racial, gender, and class politics of modern China. GE credit; ArtHum, Div.—III. (III.) Chen

(new course-eff. winter 05)

#### 102. Chinese American Literature (in English) (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: upper division standing; course in Chinese history recommended. English language survey of Chinese American literature which reflects cultural roots in China before immigration and the diaspora experience in the United States after immigration. Memory, nostalgia, national identities, cross-cultural communication, globalization, and trans-national politics. GE credit: ArtHum, Diy, Wrt.—II. (II.) Chen

(new course—eff. winter 05)

#### 103. Modern Chinese Drama (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: upper division standing; a course in Chinese history recommended. English language survey of modern Chinese spoken drama in the twentieth century and its major playwrights, in the context of Chinese history and the interaction of Chinese culture with other cultures. GE credit: ArtHum, Div, Wrt.—II. (II.) Chen

(new course—eff. winter 05)

#### **Communication (CMN)**

130. Group Communication Processes (4)

#### (cancelled course—eff. fall 04)

#### 144. Media Entertainment (4)

Lecture/discussion—4 hours. Prerequisite: course 102; course 141 recommended. Effects and appeal of media entertainment, emphasizing emotional reactions. Topics include key concepts of entertainment research such as mood management, and the respective features and emotional/social-psychological effects of genres such as comedy, mystery, thriller, sports, music, horror, and erotica.—III. (III.) Knobloch

(new course-eff. fall 04)

#### **Comparative Literature (COM)**

#### 165. Caribbean Literatures (4)

Lecture/discussion—4 hours. Prerequisite: upper division standing. Comparative approach to the multi-lingual, multi-cultural literatures of the Caribbean. Works from English, French, and Spanish speaking regions with special attention to problems of identity, diaspora and resistance, class, gender, race. Not open for credit to students who have completed course 165S. GE credit: ArtHum, Div, Wrt.—II. (II.) Blanchard

(change in existing course—eff. fall 04)

#### 1655. Caribbean Literatures (4)

Lecture/discussion—4 hours. Prerequisite: upper division standing. Comparative approach to the multi-lingual, multi-cultural literatures of the Caribbean. Works from English, French, and Spanish speaking regions with special attention to problems of identity, diaspora and resistance, class, gender, race. Taught at the University of Havana, Cuba. Not open for credit to students who have completed course 165. GE credit: ArtHum, Div, Wrt.—II. (II.) Blanchard

(new course-eff. fall 04)

#### Design (DES)

136. Recording Historic Structures (4)

(cancelled course—eff. fall 04)

#### 160A. Textile Design: Patterns and Resists (4)

Studio—8 hours. Prerequisite: courses 1, 14, 15, and 77A. Exploration of traditional and contemporary process to create images and patterns on fabric using disperse, fiber-reactive, vat, acid dyes, and textile pigments. Emphasis on individual exploration and interpretation of processes and techniques.—Rivers

(change in existing course-eff. fall 04)

### 160B. Textile Design: Screen Printing and Advanced Techniques (4)

Studio—8 hours. Prerequisite: course 160A. Screen printing on fabrics, textile design and soft-product development, and integration of hand-produced and digitally generated imagery on cloth. Field trip required.—Rivers

(change in existing course-eff. fall 04)

#### 170A. Fashion Design: Unique Expression (4)

Studio—8 hours. Prerequisite: course 1, 14, 15, and 77B or consent of instructor. Exploration of fashion design as an expression of contemporary and projected individual image. Emphasis on developing two-dimensional conceptualizations of ideas and translating them into one-of-a-kind garments utilizing new fabric technologies and archetypal forms. Field trip required.

(change in existing course—eff. fall 04)

#### 177. Computer-Assisted Apparel Design (4)

Studio—8 hours. Prerequisite: courses 16, 77A, 77B, 160A, 170A, 170B. Advanced exploration of apparel design processes for industry with emphasis on computer-assisted design applications. Field trip required.

(change in existing course-eff. fall 04)

#### Dramatic Art (DRA)

#### 124E. Costume Design for Film (4)

Lecture/discussion—4 hours. Prerequisite: course 24 or 124D or consent of instructor. Theory and practice of the art and business of film costume design. Script analysis, costume research, developing design concepts, budgeting, and current production practices and methods. Execution of designs for period and contemporary films. Viewing of current films.—II. (II.) Morgan

(new course—eff. winter 05)

#### **East Asian Studies (EAS)**

#### 190. East Asian Studies Seminar (4)

Seminar—3 hours; term paper. Prerequisite: upper division standing or consent of instructor. Political, social, cultural, and economic issues in East Asia. Topic varies each year. May be repeated for credit if topic differs. Not offered every year.

(new course-eff. summer II 04)

#### **Engineering: Biomedical (BIM)**

#### 189A-C. Topics in Biomedical Engineering (1-5)

Prerequisite: consent of instructor. Topics in Biomedical Engineering. (A) Cellular and Molecular Engineering (B) Biomedical Imaging (C) Biomedical Engineering. May be repeated if topic differs. Not offered every year.

(new course-eff. fall 04)

#### 242. Introduction to Biomedical Imaging (4)

Lecture—4 hours. Prerequisite: Physics 9D and Electrical and Computer Engineering 106 or consent of instructor. Basic physics and engineering principles of image science. Emphasis on ionizing and nonionizing radiation production and interactions with the body and detectors. Major imaging systems: radiography, computed tomography, magnetic resonance, ultrasound, and optical microscopy.—I. (I.) Insana, Boone, Seibert

(change in existing course—eff. fall 04)

#### **Engineering: Chemical (ECH)**

#### 160. Fundamentals of Biomanufacturing (3)

Lecture—3 hours. Prerequisite: Microbiology 102, Biological Sciences 102 or Animal Biology 102. Principles of large scale bioreactor production of metabolites, enzymes, and recombinant proteins including the development of strains/cell lines, fermentor/bioreactor design, monitoring and operation, product recovery and purification, and biomanufacturing economics. Not open for credit to students who have completed course 161C or both 161A and 161B; only 2 units of credit to students who have completed either course 161A or 161B.— McDonald

(new course—eff. winter 05)

#### **Engineering: Civil and Environmental (ECI)**

**19. C Programming for Civil and Environmental Engineers (4)** Lecture—3 hours; laboratory—3 hours. Prerequisite: Mathematics 22A (may be taken concurrently). Computational problem solving techniques for civil and environmental engineering applications using structured C programming. Algorithm design applied to realistic problems. Not open for credit to students who have completed course

119A.—II. (II.) Jeremic, Kleeman (new course—eff. winter 05)

#### 119A. C/FORTRAN Programming for Engineers (4)

(cancelled course—eff. winter 05)

### 253. Dynamic Programming and Multistage Decision Processes (4)

Lecture—4 hours. Prerequisite: Mathematics 21C, 22A, programming course; Applied Science Engineering 115 recommended. Operations research. Optimization techniques with a focus on dynamic programming in treating deterministic, stochastic, and adaptive multistage decision processes. Brief review of linear programming and non-linear programming. Applications in transportation networks and other civil infrastructure systems.—III. (III.) Fan

(new course—eff. spring 05)

#### **Engineering: Computer Science (ECS)**

#### 152A. Computer Networks (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 110 or Electrical and Computer Engineering 73, Mathematics 131 or Statistics 131A or 120 or 32. Overview of local and wide-area computer networks. ISO seven-layer model. Physical aspects of data transmission. Data-link layer protocols. Network architectures. Routing. TCP/IP protocol suite. Local area networks. Medium access protocols. Network performance analysis. (Same course as Electrical and Computer Engineering 173A.)—I, II, III. (I, II, III.)

(change in existing course-eff. winter 05)

#### 163. Information Interfaces (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 110; course 175 recommended. Art and science of information visualization and interfaces for information systems. Design principles of human-computer interaction. Visual display and navigation of nonspatial and higher dimensional data. Implementations, performance issues, tradeoffs, and evaluation of interactive information systems.— III. (III.) Ma, Amenta

(change in existing course—eff. spring 05)

#### 226. Computational Geometry (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 175, 222A. Mathematics of unstructured data. Algorithms for data structures such as Voronoi diagrams, oct-trees, and arrangements. Applications in computer graphics, concentrating on problems in three-dimensions. Offered in alternate years.—III. Amenta, Max

(new course—eff. spring 05)

#### **Engineering: Electrical and Computer (EEC)**

#### 173A. Computer Networks (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: Computer Science Engineering 110 or course 73, Mathematics 131 or Statistics 131A or 120 or 32. Overview of local and wide-area computer networks. ISO seven-layer model. Physical aspects of data transmission. Data-link layer protocols. Network architectures. Routing. TCP/IP protocol suite. Local area networks. Medium access protocols. Network performance analysis. (Same course as Computer Science Engineering 152A.)—I, II, III. (I, II, III.)

(change in existing course—eff. winter 05)

#### **Engineering: Mechanical and Aeronautical (MAE)**

### 207. Engineering Experimentation and Uncertainty Analysis (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: Engineering 107. Design and analysis of engineering experiments with emphasis on measurement standards, data analysis, regressions and general and detailed uncertainty analysis, including statistical treatment of experimental data intervals, propagation of bias and precision errors, correlated bias approximations, and using jitter programs.—II. (II.) Baughn

(change in existing course-eff. winter 05)

#### English (ENL)

#### 290NF. Seminar in Creative Writing of Non-Fiction (4)

Seminar—3 hours; term paper. Prerequisite: consent of instructor, graduate standing, preference given to those enrolled in the master's program in Creative Writing. The writing of literary non-fiction, with emphasis on autobiography, biography, memoir, the occasional or nature essay, or other non-fiction prose narratives. May be repeated for credit.

(change in existing course-eff. fall 04)

#### Entomology (ENT)

#### 214. Vector-Borne Infectious Diseases: Changing Patterns (2)

Lecture/discussion—2 hours. Vector-borne infectious diseases especially as they relate to changing patterns associated with climatic changes, trade and population movement. (Same course as Population Health and Reproduction 214.)—I. (I.) Edman, Chomel

(new course-eff. fall 04)

#### **Environmental Science and Policy (ESP)**

#### 101. Ecology, Nature, and Society (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: Anthropology 1 or 2 or course 30 or Evolution and Ecology 100 or Biological Sciences 101. Interdisciplinary study of diversity and change in human societies, using frameworks from anthropology, evolutionary ecology, history, archaeology, psychology, and other fields. Topics include population dynamics, subsistence transitions, family organization, disease, economics, warfare, politics, and resource conservation. (Same course as Anthropology 101.) GE credit: SocSci, Div, Wrt.—II. (II.) Borgerhoff Mulder

(change in existing course—eff. winter 05)

#### 105. Evolution of Societies and Cultures (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: Anthropology 1 or 2 or course 30 or Evolution and Ecology 100 or Biological Sciences 101. Interdisciplinary study of social and cultural evolution in humans. Culture as a system of inheritance, psychology of cultural learning, culture as an adaptive system, evolution of maladaptations, evolution of technology and institutions, evolutionary transitions in human history, coevolution of genetic and cultural variation. Only 2 units of credit to students who have completed course 101 or Anthropology 101 prior to fall 2004. (Same course as Anthropology 105.) GE credit: SocSci, Wrt.—III. (III.) McElreath, Richerson

(new course-eff. fall 04)

#### **Evolution and Ecology (EVE)**

#### 220. Species and Speciation (3)

Lecture—2 hours; discussion—1 hour. Prerequisite: course 100, Philosophy 108 or the equivalent; History and Philosophy of Science 130B recommended. Current status of species concepts, models of speciation, current research on speciation, and relevance of species to conservation biology. Offered in alternate years.—II. Shapiro

(new course-eff. winter 05)

#### French (FRE)

#### 105. Advanced French Grammar (4)

Lecture—3 hours; extensive writing or discussion—1 hour. Prerequisite: course 23 or the equivalent. Understanding of, and extensive practice with, various grammatical structures in French. Lexical-semantic, morphological, and syntactic analysis.—II. (II.) Anderson

(new course—eff. winter 05)

#### German (GER)

47. Erasmus and Christian Humanism (4)

(cancelled course—eff. fall 04)

### 118D. Germany Between 1949 and 1989: Division and Restoration (4)

(cancelled course—eff. fall 04)

#### 122. Reformation and Baroque (4)

Lecture/discussion—3 hours; term paper. Prerequisite: course 22. Exemplary literary works of the 16th and 17th centuries tracing the principal lines of development and showing the reflection in literature of the social, as well as religious, scenes. Offered in alternate years. GE credit: ArtHum.—I. Bernd

(new course—eff. fall 04)

#### 122A. Humanism and Reformation (4)

(cancelled course-eff. fall 04)

#### 122B. The Literary Baroque (4)

(cancelled course—eff. fall 04)

### 140. German Political Literature from the Middle Ages to the Present (4)

(cancelled course-eff. fall 04)

**145. The Literature of Deviance: Mann, Hesse, Kafka (4)** (cancelled course—eff. winter 05)

#### 197T. Tutoring in German (1-4)

Tutorial—3-12 hours. Prerequisite: consent of German Program Director. Tutoring in undergraduate courses including leadership in small voluntary discussion groups affiliated with department courses. May be repeated up to 8 units of credit (P/NP grading only.)

(change in existing course-eff. fall 04)

#### **History (HIS)**

#### 7. Ethnicity, Race and Identity in Latin America (4)

(cancelled course—eff. fall 04)

### 190A. Middle Eastern History I: The Rise of Islam, 600-1000 (4)

Lecture—3 hours; extensive writing. Prerequisite: course 6 recommended. Middle Eastern history from the rise of Islam to the disintegration of the Abbasid Caliphate; the formative centuries of a civilization. Politics and religion, conquest and conversion, arts and sciences, Christians, Jews and Muslims, gender and sexuality, orthodoxy and heterodoxy. Offered in alternate years. GE credit: ArtHum or SocSci, Div, Wrt.—I. Tezcan

(new course—eff. spring 04)

### 190B. Middle Eastern History II: The Age of the Crusades, 1001-1400 (4)

Lecture—3 hours; extensive writing. Prerequisite: course 6 recommended. Middle Eastern history during the age of the Crusades and Mongol invasions. The idea of holy war, the Crusades, the Mongols as the bearers of Chinese arts, nomads and sedentary life, feudalism, mysticism, slavery, women in the medieval Middle East. Offered in alternate years. GE credit: ArtHum or SocSci, Div, Wrt.—I. Tezcan

(new course—eff. fall 04)

#### 190C. Middle Eastern History III: The Ottomans, 1401-1730 (4)

Lecture—3 hours; extensive writing. Prerequisite: course 6 recommended. Middle Eastern history from the foundation of the Ottoman Empire on the borderlands of Byzantine Anatolia through its expansion into Europe, Asia, and Africa, creating a new cultural synthesis including the Arab, Greek, Islamic, Mongol, Persian, Slavic, and Turkish traditions. Offered in alternate years. GE credit: ArtHum or SocSci, Div, Wrt.—II. Tezcan

(new course—eff. winter 05)

#### 201A-N, P-Q, S-T, X. Sources and General Literature of History (4)

Seminar—3 hours; term paper. Prerequisite: consent on instructor. Designed primarily for students preparing for higher degrees in history. (A) Ancient; (B) Medieval; (C) Renaissance and Reformation; (D) Early Modern Europe; (E) Europe since 1815; (F) China to 1880; (G) China since 1880; (H) Britain; (I) Latin America since 1810; (J) American History to 1787; (K) United States, 1787-1896 (L) United States since 1896; (N) Modern Japan; (P) African Historiography; (Q) Cross-Cultural Women's History; (S) History of Science and Medicine; (T) Jewish History; (X) World History. May be repeated for credit when different subject area is studied.

(new course (P)-eff. winter 05)

#### **Humanities (HUM)**

#### 92. Internship (1-12)

Internship—3-36 hours. Internships in fields where students can practice their skills. May be repeated for credit. (P/NP grading only.)

(new course-eff. fall 04)

#### 145. The Literature of Deviance: Mann, Hesse, Kafka (4)

Lecture—3 hours; term paper. Close study of selected prose works of Mann, Hesse, and Kafka as representative of modernism's fascination with social, sexual, and psychological alienation. Attention to the nuanced portrayal of deviance through formal innovations in fiction. Offered in alternate years.

(new course—eff. winter 05)

#### 180. Topics in the Humanities (4)

Lecture/discussion—3 hours; term paper. Analysis of interdisciplinary issues in the Humanities. Topics will vary. May be repeated once for credit. GE credit: ArtHum, Wrt.

(change in existing course—eff. winter 05)

#### **192.** Internship (1-12)

Internship—3-36 hours. Internships in fields where students can practice their skills. May be repeated for credit. (P/NP grading only.)

(new course—eff. fall 04)

#### International Commercial Law (ICL)

#### 242. Private International Law (2)

Lecture/discussion—20 hours. Prerequisite: course 201, law school education or equivalent. How law operates across national borders; emphasis on methods of resolving international disputes. International aspects of jurisdiction, choice of law, enforcement of judgments, choice of forum, service of process, taking of evidence, foreign sovereign immunity, extraterritorial regulation of antitrust, securities and other national laws. Offered in alternate years.—Wolff

(change in existing course-eff. special session 04)

#### 290. American Legal System Research Seminar (1)

Seminar—5 hours. Prerequisite: course 201, law school education or equivalent. The American legal system and its structure. Legal research methodologies and presentation with attention to analysis, synthesis, organization, and editing techniques common to legal writing. (S/U grading only.)—Simmons

(new course—eff. special session 04)

#### 290A. American Legal System Research Seminar (1)

(cancelled course—eff. special session 04)

#### 290B. American Legal System Research Seminar (1)

(cancelled course—eff. special session 04)

#### Japanese (JPN)

#### 1A. Accelerated Intensive Elementary Japanese (15)

Lecture/discussion—15 hours. Special 12 week accelerated, intensive summer session course that combines the work of courses 1, 2 and 3. Introduction to Japanese grammar and development of all language skills in a cultural context with emphasis on communication. Not open for credit to students who have completed course 1, 2, or 3.—Iwasaki

(new course-eff. summer II 04)

#### Landscape Architecture (LDA)

#### **181F. Landscape Ecology and Design Planning Studio (3)** Studio—6 hours. Prerequisite: courses 21, 23, 50, 60 and 170, 180F concurrently. Design theory and methods to real-world projects in ecology. Ecological principles and their application in biological conservation, ecological restoration, and landscape planning, design, and management. Field trip required. Offered in alternate years.—II. Greco

(change in existing course-eff. fall 04)

#### Law (LAW)

#### 205. Constitutional Law I (4)

Discussion—4 hours. The principles, doctrines and controversies regarding the basic structure of and division of powers in American government. Specific topics include judicial review, jurisdiction, standing to sue, federalism, federal and state powers and immunities, and the separation of powers among the branches of the federal government.

(change in existing course-eff. fall 04)

#### 238A. Tax Strategies of Business (2)

(cancelled course—eff. fall 04)

#### 247B. Corporate Tax (3)

Independent study—3 hours; discussion. Federal income tax relationship between corporations and federal income tax relationship between corporations' owners. Transfer of funds into a corporation on formation and the re-transfer of money and property from the corporation to shareholders. Taxable and non-taxable corporate restructuring in the form of sales, mergers, acquisitions, and divisions of corporations. Subchapter S corporations.

(change in existing course—eff. fall 04)

### **248E. Law of the United Nations (2)** (cancelled course—eff. fall 04)

#### 263B. Advanced Trial Practice (2)

(cancelled course—eff. fall 04)

#### 266. Commercial Law (2)

(cancelled course-eff. fall 04)

#### 408A. Education Law (2)

Seminar—2 hours. An introduction to the field of "school law," focusing on public education from kindergarten through high school. Topics range from constitutional law, first amendment and due process issues for both faculty and students, to federal and state law on special education. Equitable funding of public schools and labor relations under public sector state statutes.

(change in existing course—eff. spring 05)

#### 411A. International Law Journal (1-2)

The Editor in Chief of the Journal of International Law and Immigration receives two credits for each semester of service. Only one person may receive this credit in any one semester as editor in chief. Managing and executive editors receive 1 unit. (S/U grading only.)

(change in existing course—eff. fall 04)

#### 411B. Journal of Juvenile Law and Policy (1-2)

The Editor in Chief of the Journal receives two credits for each semester of service. Only one person may receive this credit in any one semester as editor in chief. Managing and executive editors receive 1 unit. (S/U grading only.)

(change in existing course-eff. fall 04)

#### Management (MGT/MGP)

#### 224. Managing People in Modern Organizations (3)

Lecture/discussion—3 hours. Modern systems for managing people. Examination of the changing workforce and workplace, emphasizing high-technology and knowledge-intensive organizations. The impact of firms' environment (competition, product market, regulations) on choices for managing people. The consequences of these choices for firms and managers.—II. (II.) Bechky

(change in existing course—eff. winter 05)

#### **Medical Sciences (MDS)**

#### 411A-411B-411C. Doctoring 1 (4-3.5-3)

Discussion—2-3 hours; clinical activity—1 hour; lecture/discussion—2-2.5 hours. Prerequisite: approval of committee on student progress. Small, case-based learning groups with training in patient communication and interviewing techniques, clinical identification and problem solving, applications of social, psychological, cultural, bioethical, and basic science concepts to patient case scenarios, outpatient clinical experiences and didactic presentations. (Deferred grading only, pending completion of sequence. P/F grading only.)—I-II-III. (I-II-III.) Jerent, Callahan

(new courses-eff. fall 04)

#### 421A. Doctoring 2 (2)

Discussion—2 hours; lecture/discussion—2 hours; internship—1 hour. Prerequisite: approval of School of Medicine Committee on Student Progress. Application of multidisciplinary basic, social and clinical science concepts to clinical cases in small group discussions. History and physical examination with M.D. preceptors. Didactics in epidemiology, ethics, sexuality, economics, and clinical reasoning. Evaluation of professional competencies, attitudes and skills needed in the practice of clinical medicine. (Deferred grading only, pending completion of sequence. P/F grading only.)—IV. (IV.) Stevensen

(new course—eff. Summer 04)

#### 430A. Doctoring 3 (2)

Discussion—3 hours. Prerequisite: approval by the School of Medicine Committee on Student Progress. Application of multidisciplinary basic, social and clinical science concepts to clinical cases in small group discussions facilitated by medical school faculty. Evaluation of professional competencies, attitudes and skills needed in the practice of clinical medicine. (Deferred grading only, pending completion of sequence. H/P/F grading only.)—IV. (IV.) Wilkes

(change in existing course—eff. Summer 04)

#### 431A. Doctoring 3 (2)

(cancelled course—eff. summer 04)

#### 440A-440B-440C-440D. Doctoring 4 Teaching Fellowship (3)

Discussion—1.5 hours; seminar—0.5 hours. Prerequisite: consent of instructor. Instruction on teaching methodology and pedagogy. Mentored teaching of junior medical students in seminar, lecture, and bedside. (Deferred grading only, pending completion of sequence. H/ P/F grading only.)—IV-I-II-III. (IV-I-II-III.) Stevenson

(new course-eff. summer 04)

#### 460CR. Introduction to Clinical Research (3)

Lecture—3 hours; independent study. Prerequisite: completed M.D., D.D.S, D.M.D., O.D., N.D., Pharm.D., D.V.M., Ph.D., or D.N.S. in nursing, acceptance into Clinical Research Graduate Group K30 program. Introduction to the CRGG program and overview of major clinical research topics. Overview of basic clinical skills needed to accomplish CRGG mentored research project. (P/F grading only.)— Meyers, Pomeroy

(new course-eff. Special session 2004)

#### 461CR. Strategies for Grant Writing (2)

Lecture—1 hour; discussion—2 hours. Prerequisite: completed M.D., D.D.S, D.M.D., O.D., N.D., Pharm.D., D.V.M., Ph.D., or D.N.S. in nursing, acceptance into Clinical Research Graduate Group K30 program. Practical skills and strategies to create successful grant proposals in the NIH style and format. Generating ideas, identifying and accessing research resources, grant components, specific aims, backgound and significance, preliminary studies, budgets, and bios. Matriculation through UC system, and resubmissions. (P/F grading only.)—Rutledge

(new course—eff. special session 2004)

### 462CR. Introduction to Clinical Epidemiology and Study Design (3)

Lecture—25 hours; discussion—10 hours. Prerequisite: completed M.D., D.D.S, D.M.D., O.D., N.D., Pharm.D., D.V.M., Ph.D., or D.N.S. in nursing, acceptance into Clinical Research Graduate Group K30 program. Anatomy and physiology of conducting clinical epidemiologic research. Familiarity with three basic study designs (crosssectional, case-control, and cohort). Principles of measurements in clinical epidemiological studies, basic methods for analyzing data, and ethical issues involved in conducting research. (P/F grading only.)— McCurdy, Romano

(new course—eff. special session 2004)

#### 463CR. Methods in Clinical Research (4)

Lecture—3 hours; discussion—1.5 hours; laboratory/discussion—1.5 hours. Prerequisite: completed M.D., D.D.S, D.M.D., O.D., N.D., Pharm.D., D.V.M., Ph.D., or D.N.S. in nursing, acceptance into Clinical Research Graduate Group K30 program. Overview of major approaches to clinical research, including health services research techniques, informatics, using the GCRC, and preclinical methodologies available to enhance clinical projects. Overview of the clinical research support infrastructure available at UC Davis. Range of methodologies that can be applied to clinical research and multi-disciplinary perspective about clinical research. (P/F grading only.)—Lloyd, Kravitz, Berglund

(new course-eff. special session 2004)

#### 464CR. Responsible Conduct of Research (3)

Lecture—3 hours. Prerequisite: completed M.D., D.D.S, D.M.D., O.D., N.D., Pharm.D., D.V.M., Ph.D., or D.N.S. in nursing, acceptance into Clinical Research Graduate Group K30 program. The nine NIH-mandated modules: Data Acquisition and Reporting, Mentor Training, Publication Practices and Authorship, Peer Review/Grant Process, Collaborative Science, Human Subjects, Research with Animals, Conflict of Interest, Research Misconduct, and Entrepreneurship/ Industry Collaborations/Intellectual Property/Technology Transfer. (P/F grading only.)—Wun

(new course-eff. special session 2004)

#### 465CR. Introduction to Medical Statistics (4)

Lecture—36 hours; laboratory—12 hours. Prerequisite: completed M.D., D.D.S, D.M.D., O.D., N.D., Pharm.D., D.V.M., Ph.D., or D.N.S. in nursing, acceptance into Clinical Research Graduate Group K30 program. Biomedical applications of statistical methods. Statistics in clinical, laboratory and population medicine. Graphical and tabular presentation of data, probability, binomial, Poisson, normal, t-, F-, and Chi-square distributions, elementary nonparametric methods, simple linear regression and correlation, life tables. Microcomputer applications of statistical procedures in population medicine. (P/F grading only.)—Wegelin

(new course-eff. special session 2004)

#### Medicine: Epidemiology and Preventive Medicine (EPP)

#### 495. International Health (1)

Lecture/discussion—1 hour. Prerequisite: medical student in good standing. Forum for learning health issues and health care systems in other countries. Topics include health care for refugees, the impact of political strife on health, the health care professional in international settings. (Deferred grading only, pending completion of sequence. P/F grading only.)—I. (I.) Schenker

(change in existing course-eff. fall 04)

#### Medicine: Internal Medicine (IMD)

#### 401A. Physical Diagnosis Practicum (1)

(cancelled course—eff. fall 03)

### Medicine: Internal Medicine: Rheumatology-Allergy (RAL)

#### 209. Current Topics in Immunology (2)

Discussion—2 hours. Prerequisite: basic immunology course and consent of instructor. Current developments in various aspects of immunology and their interrelationships. Focus on areas of immunology not currently covered in the basic and advanced immunology courses. May be repeated for credit if topic differs. (S/U grading only.)—II, III. (II, III.) Van de Water

(new course-eff. winter 05)

#### Medicine: Master of Public Health (MPH)

#### 266. Applied Analytic Epidemiology (3)

Lecture—2 hours; laboratory—2 hours. Prerequisite: Preventive Veterinary Medicine 404 or consent of instructor. Principles and applications in analysis of epidemiologic data. Methods of analyzing stratified and matched data, logistic regression for cohort and casecontrol studies, Poisson regression, survival-time methods. (Same course as Population Health and Reproduction 266.)—III. (III.) Kass

(new course—eff. spring 04)

#### Medicine: Medical Microbiology (MMI)

#### 194H. Senior Honors Project in Medical Microbiology and Immunology (5)

Independent study—15 hours. Prerequisite: course 199 and consent of instructor. Project in research related to immunology of medically important viruses. Development of a hypothesis-driven project, performance of experimental protocols and preparation of graphical representation of original data. Requires oral and written presentation of research results. May be repeated 3 times for credit with consent of instructor. (P/NP grading only.)—I, II, III. (I, II, III.) Torres

(new course—eff. spring 04)

#### 209. Current Immunology (2)

(cancelled course—eff. winter 05)

#### 210. Physician Scientist Molecular Medicine Journal Club (1)

Lecture/discussion—1 hour. Research articles in current literature. Topics/articles to include a broad range of frontiers in biomedical literature. May be repeated for credit if topic differs. (S/U grading only.)—I. (I.) Bevins

(new course—eff. fall 04)

#### 409. Current Immunology (2)

(cancelled course-eff. winter 05)

#### Medicine: Radiation Oncology (RON)

**190. Molecular and Cellular Radiation Biology Seminar (1)** Lecture—1 hour. Topics in radiation biology and physics given by senior scientists. Focus on cellular response to ionizing radiation, radiation risk assessment, DNA damage and repair, and radiation dosimetry and imaging. May be repeated for credit when topic differs. (P/NP grading only.)—I, II, III. (I, III, III.) Vijayakumar, Lui

(new course-eff. fall 04)

#### Middle East and South Asian Studies (MSA)

### 100. Middle East and South Asia: Comparative Perspectives (4)

Lecture—3 hours; extensive writing. Ethnographic and historical points of intersection and divergence in various aspects of the Middle East and South Asia in precolonial, colonial, and postcolonial societies. Anthropological, historical, and theoretical debates surrounding the region. GE credit: ArtHum, Div, Wrt.—I, II, III. (I, II, III.)

(new course-eff. summer 04)

#### 180. Topics in Middle East and South Asian Studies (4)

Lecture—3 hours; extensive writing. Comparative perspective on the Middle East and South Asia. Topics may include modernity, religious traditions, colonialism, subalternity and social movements, gender and sexuality, history and memory, science and development, ritual and performance, public culture, diasporas. May be repeated once for credit. GE credit: ArtHum, Div, Wrt.—I, II, III. (I, II, III.)

(new course-eff. fall 04)

#### 192. Internship (1-12)

Internship—3-36 hours. Prerequisite: course 100. Supervised internship on and off campus in the area of Middle East and South Asia Studies. May be repeated for up to 12 units of credit. (P/NP grading only.)

(new course—eff. summer I 04)

#### 198. Directed Group Study (1-5)

Prerequisite: course 100. (P/NP grading only.)

(new course—eff. summer II 04)

#### 199. Special Study for Advanced Undergraduates (1-5)

Prerequisite: course 100. (P/NP grading only.)

(new course—eff. summer II 04)

#### Nature and Culture (NAC)

#### 130. The Nature of Exploration (4)

Lecture/discussion—3 hours; term paper. Prerequisite: upper division standing. Writings and drawings of a historical period of exploration, with a focus on descriptions of nature. Consideration of what representations of the enterprise of exploration reveal about the cultural values of the explorers, and how those values persist. Offered in alternate years. GE credit: ArtHum, Wrt.—I.

(new course-eff. fall 04)

#### **Nutrition (NUT)**

#### 219B. International Nutrition (3)

Lecture—3 hours. Prerequisite: course 219A. Intervention programs to prevent or ameliorate nutritional problems in low-income populations. Planning, implementing, and evaluating nutrition intervention programs. Offered in alternate years.—III. Brown, Dewey

(change in existing course-eff. fall 04)

#### **Political Science (POL)**

#### 110. The Strategy of Politics (4)

Lecture/discussion—4 hours. Introduction to game theory. Explanation of the behavior of individuals in strategic interaction. Rational and behavioral approaches. Applications to political science and other fields.—I. (I.) Fowler

(new course-eff. fall 04)

#### 140A. Comparative Electoral Systems (4)

Lecture/discussion—4 hours. Prerequisite: course 2. Workings of electoral institutions, focusing on systems used to elect presidents and assemblies, pass laws, and generally make decisions. Examples from systems throughout the world, including cases from both the advanced industrial and developing worlds. Offered in alternate years.—II. Scheiner

(new course-eff. winter 05)

#### 144. Russian Politics and Policy (4)

Lecture/discussion—4 hours. Prerequisite: course 2 or consent of instructor. Democratization, state-building and economic reform; creation of new institutions; impacts of Soviet rule. GE credit: SocSci, Wrt.—III. (III.) Andrews

(change in existing course—eff. fall 04)

#### 219C. Contemporary Political Theory (4)

Seminar—3 hours; term paper. Survey of important works in contemporary political theory including such writers as Nietzsche, Heidegger, Arendt, Rawls, Nozick, Sandel. May be repeated for credit if topic differs.—III. (III.) Scott

(new course-eff. fall 04)

#### Plant Biology (PLB)

#### 170. Plant Molecular Ecology (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: Biological Sciences 1A and 1C or the equivalent. Introduction to the application of molecular genetic techniques to questions concerning ecological, genetic and evolutionary processes in plant populations. Emphasis on the use of molecular genetic information for decision making in management and conservation.—II. (II.) Jasieniuk

(change in existing course-eff. winter 05)

#### **Religious Studies (RST)**

#### 75. Introduction to Chinese Philosophy (4)

Lecture/discussion—4 hours. Introduction to Chinese philosophy from classical pre-modern times; emphasis on basic concepts and their impact on social conduct; the Age of Philosophers, the Han synthesis, the medieval Buddhist contribution. Not offered every year.—Lai

(change in existing course-eff. summer II 04)

#### 160. Introduction to Islamic Thought (4)

Lecture—3 hours; extensive writing. Prerequisite: course 60 recommended. The development of Islamic thought from the first centuries of Islam to the eighteenth century. Theology, philosophy, ethics, Sufism, historiography, political theory, fundamentalism, al-Farabi, al-Ghazzali, Ibn Rushd, Tusi, Ibn al-Arabi, Rumi, Molla Sadra, Ibn Khaldun, Ibn Abd al-Wahhab. Offered in alternate years. GE credit: ArtHum or SocSci, Div, Wrt.—II. Tezcan

(new course-eff. fall 04)

#### 162. Introduction to Islamic Law (4)

Lecture—3 hours; extensive writing. Prerequisite: course 60 recommended. The development of Islamic law in the formative centuries of Islam, ca. 600-1000, as well as its adaptation to changing economic, social, and political conditions in subsequent periods. Legal schools, legal theory, the Shari'a, reformist movements, human rights. Offered in alternate years. GE credit: ArtHum or SocSci, Div. Wrt.—II. Tezcan

(new course—eff. fall 04)

#### Sociology (SOC)

#### 160. Sociology of the Environment (4)

Lecture—3 hours; term paper. Prerequisite: upper division standing in Sociology recommended. Production, consumption, and urban expansion. Basic social logics surrounding current problems of resource scarcity (environmental extractions) and excess wastes (environmental additions). Ways that society can change and re-organize itself to become more environmentally conscious and hence ecologically sustainable.—II. (II.) Beamish

(new course-eff. winter 05)

#### **Technocultural Studies (TCS)**

#### 103. Interactivity and Animation (4)

Lecture/discussion—3 hours; laboratory—3 hours. Fundamentals of creating interactive screen-based work. Theories of interactivity, linear versus non-linear structures, and audience involvement and participation. Use of digital production tools to produce class projects.—I, III. (I, III.)

(change in existing course—eff. fall 04)

#### Veterinary Medicine (VMD)

#### 400. Doctoring (1.2)

Discussion—12 sessions. Prerequisite: first-year standing in the School of Veterinary Medicine. Introduction to the "art" of veterinary medicine, focusing on essential skills such as communication, teambuilding, leadership, conflict management, stress management and financial management. Emphasis on practical application of these skills to be able to function efficiently and effectively in practice, academia, industry, government or other career. (S/U grading only.)—1. (I.) Timmins, Klingborg

(new course-eff. fall 04)

### 401A. The Normal Anatomy of the Canine Locomotor System (3.4)

Lecture—16 sessions; laboratory—18 sessions. Prerequisite: first-year standing in the School of Veterinary Medicine. Normal canine anatomy of bones, joints, muscles, ligaments, tendons, nerves and vessels of the vertebral column and limbs; musculoskeletal physiology and biomechanics.—I. (I.) Meyers

(change in existing course-eff. fall 04)

#### 401B. The Normal Anatomy of the Canine Head (1.7)

Lecture—7 sessions; laboratory—8 sessions; discussion—2 sessions. Prerequisite: first-year standing the School of Veterinary Medicine. Normal canine anatomy with comparison to other species of bones, joints, muscles, ligaments, tendons, nerves and vessels of the head including the eye and ear.—II. (II.) Plopper

(change in existing course-eff. winter 05)

### **402.** Structure and Function of the Cardiovascular and Respiratory Systems (4.4)

Lecture—31 sessions; laboratory—13 sessions. Prerequisite: firstyear standing in the School of Veterinary Medicine or consent of instructor. Integrated view of cardiovascular and respiratory anatomy and physiology. (Deferred grading only, pending completion of sequence.)—I, II. (I, II.) Jones

(change in existing course-eff. fall 04)

#### 407L. Principles and Techniques of Surgery and Anesthesia Laboratory (1.4)

Laboratory—14 sessions. Prerequisite: third-year standing in the School of Veterinary Medicine. Introduction to surgical anatomy, operative and anesthetic skills. (Deferred grading only, pending completions of sequence. S/U grading only.)—1, II, III. (I, II, III.) Gregory, Ilkiw

(change in existing course—eff. fall 04)

#### 412. Fundamentals of Zoonoses (1.1)

Lecture—11 sessions. Prerequisite: second-year standing in the School of Veterinary Medicine or consent of instructor. Major zoonotic infections transmitted mainly by domestic animals, especially pets and particularly in North America. A short review of symptoms in animals and humans, epidemiology, diagnostic tests, treatment and prevention will be presented for each animal species and each infection or infestation. Some zoonotic diseases, subject to USDA rules and regulations, will be studied in more detail (i.e. rabies, brucellosis, tuberculosis, avian chlamydiosis).—III. (III.) Chomel

(change in existing course—eff. spring 05)

### 414A. Principles of Veterinary Pharmacology and Toxicology (2.5)

Lecture—20 sessions; discussion—4 sessions; laboratory—1 session. Prerequisite: second-year standing in the School of Veterinary Medicine. Introduction to the principles of pharmacology and toxicology. Pharmaco-/toxicokinetics, pharmaco-/toxicodynamics and chemotherapy of bacterial, neoplastic, fungal and viral diseases.—I. (I.) Buckpitt

(change in existing course—eff. fall 04)

#### 415. Clinical Skills (1)

Laboratory—10 sessions. Prerequisite: first-year standing in the School of Veterinary Medicine. Development of clinical skills by learning procedures that are important to the practice of veterinary medicine in a variety of species in both a laboratory and clinical environment. (Deferred grading only, pending completion of sequence. S/U grading only.)—I, II, III. (I, III, Nelson

(new course—eff. fall 04)

#### 421. Principles of Neurosciences (2.7)

Lecture—22 sessions; laboratory—5 sessions. Prerequisite: first-year standing in the School of Veterinary Medicine. An integrated study of normal neurobiology, neuroanatomy and neurophysiology, to enable students to engage in studies of neurologic disorders and clinical neurology.—II. (II.) Gietzen

(change in existing course-eff. winter 05)

### **430.** Principles of Radiography and Radiologic Interpretation (3.6)

Lecture—24 sessions; laboratory—2 sessions; discussion—10 sessions. Prerequisite: first-year standing in the School of Veterinary Medicine. Physical principles of x-ray production and x-ray matter interactions as they pertain to diagnostic medical imaging and radiation safety. Principles of radiologic interpretation. Principles of ultrasound physics and interpretation. (Deferred grading only, pending completion of sequence.)—I, II, III. (I, II, III.) Wisner

(change in existing course—eff. fall 04)

#### 436. Veterinary Ethics and Law (1.2)

Discussion—12 sessions. Prerequisite: first-year standing in the School of Veterinary Medicine. Ethical and legal issues critical to successful and ethical veterinary practice. Processes through which ethical and legal questions are approached and resolved. Background reading materials and discussions are supplemented with problembased learning.—I. (I.) Tannenbaum

(new course-eff. fall 04)

#### 437 Veterinary Ethics and Law (2)

Lecture—16 sessions; discussion—4 sessions. Prerequisite: third-year standing in the School of Veterinary Medicine or consent of instructor. Ethical and legal issues critical to successful and ethical veterinary practice. Processes through which ethical and legal questions are approached and resolved. Reading and discussions supplemented with problem-based learning.—III. (III.) Tannenbaum

(new course—eff. spring 05)

#### 437A. Veterinary Ethics and Law (1.2)

(cancelled course—eff. fall 04)

#### 437C. Veterinary Ethics and Law (2)

(cancelled course—eff. spring 05)

#### 438. Animal Handling (1)

(cancelled course—eff. spring 04)

#### 440. Veterinary Neurology (2.7)

Lecture—21 sessions; laboratory—6 sessions. Prerequisite: third-year standing in the School of Veterinary Medicine. Integrated study of the relationship between microanatomy, neurophysiology, neuropathology, and the clinical manifestations and diagnosis of neurological diseases, and the use of the various neurodiagnostic aids.—I. (I.) LeCouteur

(change in existing course—eff. fall 04)

#### 460. Fundamentals of Clinical Orthopedics (1)

Lecture—10 sessions. Prerequisite: third-year standing in the School of Veterinary Medicine. Fundamental concepts of veterinary orthopedics, including differentials of bone disease, diagnostics for bone disease, bone biomechanics, principles of fracture repair, applied joint anatomy, principles of joint disease, applied tendon and ligament anatomy, and principles of tendon and ligament disease.—I. (I.) Schulz

(change in existing course-eff. fall 04)

#### 470. Hospital Practices (3.4)

(cancelled course—eff. fall 04)

#### 480. Senior Clinic (15)

Clinical activity—60 hours. Prerequisite: fourth-year standing in School of Veterinary Medicine. Integration of knowledge and development of clinical judgement and skills in the diagnosis, treatment, and prevention of animal disease. (Deferred grading only, pending completion of sequence. S/U grading only.)—I, II, III. (I, II, III.) Smith

(new course—eff. Summer 04)

#### 490A. Freshman Hospital Practices (2)

(cancelled course—eff. fall 04)

## Veterinary Medicine: Anatomy, Physiology, and Behavior (APC)

#### 192. Internship (1-15)

Internship—3-45 hours. Prerequisite: upper division standing, approval of internship. Internship experience off and on campus in all subject areas offered in the Department of Anatomy, Physiology and Cell Biology. Internships are supervised by a member of the faculty. May be repeated for credit if topic differs. (P/NP grading only.)

(new course—eff. spring 04)

#### 458. Behavior Therapy in Companion Animals (2)

Lecture—20 sessions. Prerequisite: second-year standing in the School of Veterinary Medicine. Clinical application of behavior modification procedures, management and drug therapy to resolve common behavioral problems of companion animals including dogs, cats, horses and birds.—III. (III.) Hart, Bain

(change in existing course—eff. spring 05)

#### Veterinary Medicine: Medicine and Epidemiology (VME)

#### 416. Diseases of Fish (2.1)

Lecture—18 sessions; laboratory—3 sessions. Prerequisite: second- or third-year standing in the School of Veterinary Medicine or consent of instructor. Etiology, pathology, diagnosis, treatment and prevention of diseases of fish. Preventive management of diseases in aquaculture and aquaria. Offered in alternate years.—III. Hedrick

(change in existing course—eff. spring 04)

### 419. Companion Exotic Small Animal Medicine and Surgery (3.4)

Lecture—34 sessions. Prerequisite: third-year standing in the School of Veterinary Medicine or consent of instructor. The etiology, clinical presentation, diagnostic evaluation, treatment, prevention, and control of medical diseases of companion small exotic mammals, reptiles and aquarium fish.—I. (I.) Hawkins

(change in existing course-eff. fall 04)

#### Veterinary Medicine: Molecular Biosciences (VMB)

#### 418. Veterinary Complementary Medicine (1.1)

Lecture—10 sessions; laboratory—1 session. Prerequisite: first-, second-, or third-year standing in the School of Veterinary Medicine. Introduction to complementary (alternative) medicine and how it is applied for the treatment of diseases. Acupuncture, chiropractic, herbal medicine, and traditional Chinese medicine. Acupuncture technique in both equine and small animals. (S/U grading only.)—I. (I.) Mount

(change in existing course-eff. fall 04)

#### Veterinary Medicine: Pathology, Microbiology and Immunology (PMI)

#### 126L. Immunology Laboratory (2)

Laboratory—6 hours. Prerequisite: course 126 or the equivalent (may be taken concurrently). Laboratory procedures in clinical immunology. Laboratory animal immunization/bleeding. Quantitative and qualitative characterization of the immune response. Cells of the immune system.—II. (II.) Stott

(change in existing course—eff. fall 04)

### Veterinary Medicine: Population Health and Reproduction (PHR)

#### 150. Foodborne Infections and Intoxications (4)

Lecture—4 hours. Prerequisite: Food Science and Technology 104 or Pathology, Microbiology, and Immunology 127 or second- or thirdyear standing in the School of Veterinary Medicine. Prevalence and characteristics of those diseases of humans which are derived from food or food sources; access of disease agents to and distribution in food and food sources; exposure of people to these agents; prevention of foodborne diseases.—III. (III.) Cliver

(change in existing course—eff. spring 05)

#### 214. Vector-Borne Infectious Diseases: Changing Patterns (2)

Lecture/discussion—2 hours. Vector-borne infectious diseases especially as they relate to changing patterns associated with climatic changes, trade and population movement. (Same course as Entomology 214.)—I. (I.) Edman, Chomel

(new course—eff. fall 04)

#### 266. Applied Analytic Epidemiology (3)

Lecture—2 hours; laboratory—2 hours. Prerequisite: Preventive Veterinary Medicine 404 or consent of instructor. Principles and applications in analysis of epidemiologic data. Methods of analyzing stratified and matched data, logistic regression for cohort and casecontrol studies, Poisson regression, survival-time methods. (Same course as Master of Public Health 266.)—III. (III.) Kass

(new course—eff. spring 04)

#### 406. Human-Animal Interactions in Veterinary Science (1)

Lecture—9 sessions; laboratory—1 session. Prerequisite: first-, second-, or third-year standing in the School of Veterinary Medicine. Human relationships with companion animals, and, secondarily, on food, laboratory, and wild animals from the perspectives of veterinarians and their clients' needs. Emphasis on the benefits of companion animals for human mental and physical well-being, the role of animals in the human life cycle, societal traditions in keeping animals, and types of specialized and more typical relationships with animals.—II. (II.) Hart

(change in existing course—eff. winter 05)

**430.** Issues in Animal Production and Resource Utilization (2) (cancelled course—eff. fall 04)

#### 432. Reproductive Technology in Mammals and Birds (0.8)

Lecture—5 sessions; discussion—3 sessions. Prerequisite: first-year standing in the School of Veterinary Medicine or consent of instructor. Introductory course in the application of technology to the reproductive process in mammals and birds. Emphasis on domestic animals, but birds and non-domestic mammals also discussed. Exposure of students to some of the "sexier" aspects of population/ reproduction management. (S/U grading only.)—III. (III.) BonDurant

(change in existing course—eff. spring 04)

#### 432L. Reproductive Technology in Mammals and Birds, Laboratory (0.2)

Laboratory—2 sessions. Prerequisite: course 432 concurrently, firstyear standing in the School of Veterinary Medicine. Laboratory demonstrations and exercises in gamete freezing, thawing, and handling; artificial insemination of cattle; artificial insemination and other applications of reproductive technology in small ruminants. (S/U grading only.)—III. (III.) BonDurant

(change in existing course—eff. spring 05)

#### 446C. Non-Domestic Reproduction (1)

Lecture—10 sessions. Prerequisite: third-year standing in the School of Veterinary Medicine. Follows course 446A. Information relating to reproduction in non-domestic mammals, birds, and reptile species. Concepts relating to the evaluation of reproductive status, diagnosis of infertility, assisted reproduction and contraception will be presented.—III. (III.) Lasley

(change in existing course—eff. spring 05)

#### 483. Pet Loss Support Hotline and End of Life Issues (2)

Discussion/laboratory—3-6 hours. Prerequisite: first-, second-, or third-year standing the School of Veterinary Medicine. Training and experience in addressing end-of-life issues for companion animals, including hospice, decision-making and pet loss support. Responding to pet loss hotline callers who are anticipating or experiencing the end of a relationship with a beloved companion animal. Communication skills, especially supportive listening, and referral to community resources. (S/U grading only.)—I, II, III. (I, II, III.) Hart

(change in existing course—eff. spring 04)

#### 489. Personal, Financial and Professional Development (1)

Lecture—10 sessions. Prerequisite: first-, second-, or third-year standing in the School of Veterinary Medicine or consent of instructor. Tools necessary to be personally successful as veterinary students, including developing self-insight, team building skills, resume development, interview skills and understanding of personal insurance and wills, budgeting and personal finance (including fundamental investment and debt concepts). (S/U grading only.)—II. (II.) Klingborg

(change in existing course-eff. winter 05)

### Veterinary Medicine: Surgical and Radiological Sciences (VSR)

#### 401. Small Animal Radiology Case Discussions (1)

Discussion—10 sessions. Prerequisite: first-, second-, or third-year standing in the School of Veterinary Medicine. The role of diagnostic radiology in the clinical setting and student interpretation of radio-graphs. May be repeated once for credit. (S/U grading only.)—I, II, III. (I, II, III.) Wisner

(change in existing course-eff. fall 04)

#### 402. Large Animal Radiology Case Discussions (1)

Discussion—10 sessions. Prerequisite: first-, second-, or third-year standing in the School of Veterinary Medicine. The role of diagnostic radiology in the clinical setting and student interpretation of radio-graphs. May be repeated once for credit. (S/U grading only.)—I, II, III. (I, II, III.) Wisner

(change in existing course-eff. fall 04)

#### 405. Advanced Small Animal Abdominal Ultrasound (2.2)

Lecture—12 sessions; discussion—6 sessions; laboratory—4 sessions. Prerequisite: third-year standing in the School of Veterinary Medicine. The use of ultrasound for the diagnosis of common clinical diseases in both the abdomen and thorax. Examination techniques of the thorax and the abdomen covered in the laboratory sessions and examples of the abnormal presented in discussion.—II. (II.) Herrgesell

(change in existing course-eff. winter 05)

#### 423. Diagnostic Ophthalmology (1.5)

Lecture—15 sessions. Prerequisite: course 422, third-year standing in the School of Veterinary Medicine. The pathogenesis and diagnosis of commonly encountered eye diseases of common domestic animals.— III. (III.) Maggs

(change in existing course—eff. spring 05)

#### 461L. Small Animal Orthopedic Surgery Laboratory (0.4)

Laboratory—4 sessions. Prerequisite: course 461 concurrently, thirdyear standing in the School of Veterinary Medicine. Hands-on experience in application of external coaptation and basic principles of application of different types of fixation for fractures. (S/U grading only.)—II. (II.) Schultz

(change in existing course—eff. winter 05)