

UC DAVIS



2003 Fall Addendum

to the
General Catalog
and the
*Class Schedule and
Registration Guide*

Changes to the Biological Sciences Major Program

The Biological Sciences Major

A.B. Major Requirements:

	UNITS
Preparatory Subject Matter	40-53
Biological Sciences 1A-1B-1C.....	15
Chemistry 2A-2B.....	10
Chemistry 8A-8B or 118A-118B-118C.....	6-12
Physics 1A-1B or 7A-7B-7C	6-12
Statistics 13, 32, 100, or 102.....	3-4
Recommended: Chemistry 2C and Mathematics 16A-16B.	
Depth Subject Matter	38-42
Biological Sciences 101 and 102	7
Evolution: One from Evolution and Ecology 100, 140; Geology 107; or Plant Biology 116	3-5
Ecology: One from Environmental Science and Policy 100; Evolution and Ecology 101, 117.; or Plant Biology 117, 147	4
Philosophy of Biological Science: One from History and Philosophy of Science 130A, 130B, 131, Nature and Culture 100, 120, 140, Philosophy 108, or Veterinary Medicine 170	4
Physiology: One from Environmental Horticulture 102; Entomology 101, 102; Neurobiology, Physiology, and Behavior 101; or Plant Biology 111, 112.....	3-5
One course each in animal, microbial and plant diversity.....	8-17
<i>Animal diversity:</i> Entomology 100, 107, 109; Evolution and Ecology 105, 112+112L, 134; Nematology 110; Wildlife, Fish, and Conservation Biology 110, 111, 120.	
<i>Microbial diversity:</i> Microbiology 105, 162; Pathology, Microbiology and Immunology 127, 128; Plant Biology 118, 148; Plant Pathology 148; Soil Science 111.	
<i>Plant diversity:</i> Evolution and Ecology 108, 119, 140; Plant Biology 102, 108, 116, 119, 147.	
Additional upper division course work in biological sciences to achieve a total of 38 or more units (see "Approved Biology Electives" list below).	
Upper division course work must include at least 2 units (6 hours per week) of laboratory and/or fieldwork.	
Note: Although a course may be listed in more than one category, that course may satisfy only one requirement.	
Total units for the major	78-95

B.S. Major Requirements:

	UNITS
Preparatory Subject Matter	60-70
Mathematics 16A-16B-16C or 17A-17B-17C.....	9-12
Chemistry 2A-2B-2C.....	15
Chemistry 8A-8B or 118A-118B-118C.....	6-12
Biological Sciences 1A-1B-1C.....	15
Statistics 13, 32, 100, or 102.....	3-4
Physics 7A-7B-7C.....	12
Depth Subject Matter	45
Biological Sciences 101, 102, 103, 104	13
Field Requirement, Area of Emphasis Requirement, and additional units (if necessary) to achieve a total of 45 units or more	32
Note: Although a course may be listed in more than one category, that course may satisfy only one requirement.	
Field Requirement: Breadth in biology is achieved by completing one course from each field course list (a) through (e) below. Check your area of emphasis for any specific field course requirements.	
(a) <i>Evolution:</i> Anthropology 151, 152, 154A; Evolution and Ecology 100; Geology 107; Plant Biology 143.....	3-5
(b) <i>Ecology:</i> Anthropology 154B; Biological Sciences 122; Entomology 104, 156; Environmental Science and Policy 100, 121; Evo-	

lution and Ecology 101; Microbiology 120; Wildlife, Fish, and Conservation Biology 151.....	3-4
(c) <i>Microbiology:</i> Food Science and Technology 104; Microbiology 102, 140, 150, 162; Pathology, Microbiology and Immunology 127, 128; Soil Science 111	3-5
(d) <i>Neurobiology, physiology, and behavior:</i> Anthropology 154A, 154B; Entomology 102, 104; Neurobiology, Physiology, and Behavior 100, 101, 102, 141	3-5
(e) <i>Plant biology:</i> Environmental Horticulture 102, 105; Evolution and Ecology 108, 117, 119, 140; Plant Biology 102, 105, 108, 111, 112, 113, 116, 117, 118, 119, 143, 144, 147, 148, 176; Plant Pathology 120, 130, 148.....	3-5

Area of Emphasis Requirement: Depth in one area of biology is achieved by completing all requirements for one of the six areas of emphasis listed below. It will include at least 2 units (or 6 hours per week) of laboratory designated in the area of emphasis.

Evolution and Ecology emphasis 13-18

Field requirement: Students must take Evolution and Ecology 100 to satisfy Field requirement (a), and Evolution and Ecology 101 to satisfy Field requirement (b).

Evolution and Ecology 102 or 103

Biodiversity: Six or more units to include at least two units (or 6 hours per week) of laboratory from the following: Entomology 100, 100L, 107, 109; Evolution and Ecology 108, 112, 112L, 134, 134L, Geology 107, 107L; Microbiology 105; Nematology 110; Plant Biology 102, 108, 118, 147, 148; Wildlife, Fish, and Conservation Biology 110, 110L, 111, 111L, 120, 120L.....

Restricted electives.....

Select one course from: Biological Sciences 122, 122P; Entomology 103, 104, 156, 156L; Environmental Science and Policy 121, 123, 150A, 150B, 150C, 151, 151L; Evolution and Ecology 105, 117, 119, 138, 140, 141, 147, 149; Geology 107, 107L; Nematology 100; Neurobiology, Physiology, and Behavior 102; Philosophy 108; Plant Biology 116, 117, 119; Wildlife, Fish, and Conservation Biology 136.

Marine Biology emphasis 15-17

(1) *Field requirement:* Students must take Evolution and Ecology 100 to satisfy Field requirement (a), and Evolution and Ecology 101 to satisfy Field requirement (b), and Neurobiology, Physiology, and Behavior 102 or 141 to satisfy Field requirement (d).

(2) *Ocean Processes:* At least 3 units from Environmental Science and Policy/Geology 116+116G; Environmental Science and Policy 150A, 150B, 151+151L; Evolution and Ecology 115, Wildlife, Fish and Conservation Biology 157

(3) *Marine Organismal Biology:* At least 4 units from Animal Science 118, 119, 131, 136, 136A; Evolution and Ecology 112+112L; Neurobiology, Physiology, and Behavior 141+141P; Plant Biology 118; Wildlife, Fish and Conservation Biology 120+ 120L, 121, 130.....

(4) *Immersion Requirement:* One field/research course or course combination; requires residence at Bodega Marine Lab for Spring quarter or summer session: Biological Sciences 122+122P; Environmental Science and Policy 124; Neurobiology, Physiology, and Behavior 141+141P.....

Microbiology emphasis 13-18

Field requirement: Students must take Microbiology 102 to satisfy Field requirement (c).

Laboratory requirement: Students must take Microbiology 102L to satisfy the area of emphasis lab requirement.

Options: Complete one of the four options a-d below; or complete an individual option with approval from your faculty adviser.

(a) *Microbial Physiology and Molecular Genetics* option

Microbiology 102L, 140, 150.....

Select one course from Microbiology 170; Molecular and Cellular Biology 121, 161.....

Select one course from: Microbiology 105, 155L, 160, 170; Pathology, Microbiology and Immunology 127.....

(b) *Microbial Diversity and Ecology* option

Microbiology 102L, 105, 120.....	10
Select one course from: Food Science and Technology 104; Microbiology 140, 150, 162, 170; Pathology, Microbiology and Immunology 127, 128; Plant Biology 148; Plant Pathology 148; Soil Science 111	3-5
(c) <i>Biotechnology and Applied Microbiology</i> option ...	14-18
Microbiology 102L.....	2
Select two courses from Microbiology 140, 150, 170.....	6
Select one course from: Food Science and Technology 102A, 104; Viticulture and Enology 186	3-4
Select one course from Microbiology 155L; Molecular and Cellular Biology 120L, 160L	3-6
(d) <i>Medical Microbiology</i> option.....	14-18
Microbiology 102L; Pathology, Microbiology and Immunology 126	5
Select one course from: Medical Microbiology and Immunology 115, 116; Pathology, Microbiology and Immunology 127	3-5
Select one course from: Microbiology 105, 162; Pathology, Microbiology and Immunology 128	3-5
Select one course from Microbiology 140, 150, 170	3
Molecular and Cellular Biology emphasis	12-18
One course from Molecular and Cellular Biology 121, 141, or 161	3-4
Laboratory experience: One or more laboratory courses from Biological Sciences 120P; Molecular and Cellular Biology 120L, 140L, 160L; or other laboratory course to total 3 units (or 9 hours per week) that emphasizes cellular or molecular biology with approval of your adviser	3-6
Restricted electives	6-8
Select two or more courses from Biological Sciences 120; Molecular and Cellular Biology 122, 123, 126, 141, 142, 143, 144, 145, 150, 162, 163; Neurobiology, Physiology, and Behavior 103; Pathology, Microbiology and Immunology 126; Plant Biology 113, 126; or other courses with adviser's approval.	
Neurobiology, Physiology, and Behavior emphasis	15
Select courses from at least two of the following three areas and include one laboratory from Neurobiology, Physiology, and Behavior 101L, 104L, 141P, or 160L.....	15
(1) <i>Neurobiology</i> : Neurobiology, Physiology, and Behavior 100, 106, 112, 124, 125, 126, 160, 160L, 161, 162, 163, 168, 169; Psychology 121, 124, 128, 129.	
(2) <i>Physiology</i> : Anatomy, Physiology, and Cell Biology 100; Entomology 102; Exercise Biology 101, 110, 111; Neurobiology, Physiology, and Behavior 101, 101L, 103, 104L, 105, 106, 111C, 111L, 113, 114, 117, 121, 121L, 123, 127, 128, 130, 131, 139, 140, 141, 141P; Pathology, Microbiology, and Immunology 126; Wildlife, Fish, and Conservation Biology 121.	
(3) <i>Behavior</i> : Anthropology 154A, 154B; Entomology 104; Neurobiology, Physiology, and Behavior 102, 150, 152, 159; Psychology 122, 123, 129.	
Note: Neurobiology, Physiology, and Behavior 106 may be used only once to satisfy Area of Emphasis requirements.	
Plant Biology emphasis	13-16
Select one course from each of the following four areas and include one laboratory course from Evolution and Ecology 108; Plant Biology 105, 108, 111L, 116, 118, 148, 161A, 161B; Plant Pathology 148; or two laboratory courses from Evolution and Ecology 140; Plant Biology 153, 158, 171, 172L.	
(1) <i>Anatomy and morphology</i> : Evolution and Ecology 140; Plant Biology 105, 116, 118	4-5
(2) <i>Physiology and development</i> : Plant Biology 111, 112, 113; Plant Pathology 130.....	3
(3) <i>Evolution and ecology</i> : Evolution and Ecology 100, 117; Plant Biology 117, 143.....	3-4
(4) <i>Applied plant biology</i> : Agricultural Systems and Environment 110A; Plant Biology 154, 160, 171, 172, 175.....	3-4
Total Units for the Major	105-115

Approved Biology Electives

These are courses which are accepted without petition for upper division units in the Biological Science major. Many other biologically related courses may be substituted with consent of your adviser.

Agricultural Systems and Environment 110A, 135
Anatomy, Physiology, and Cell Biology 100
Anthropology 151, 152, 153, 154A, 154B, 155, 156, 157
Avian Sciences 100, 150
Biological Sciences—All upper division courses
Cell Biology and Human Anatomy 101, 101L
Chemistry 107A, 107B, 108, 150
Entomology—All upper division courses
Environmental Horticulture 102, 105
Environmental Science and Policy 100, 110, 121, 123, 124, 150A, 150B, 150C, 151, 151L
Evolution and Ecology—All upper division courses
Exercise Biology 101, 110, 111, 113
Food Science and Technology 102A, 104
Geology 107, 107L, 150A, 150B, 150C
History and Philosophy of Science 130A, 130B, 131
Medical Microbiology 115, 116
Microbiology—All upper division courses
Molecular and Cellular Biology—All upper division courses
Nature and Culture 100, 120, 140
Nematology 100, 110
Neurobiology, Physiology, and Behavior—All upper division courses
Nutrition 101, 111
Pathology, Microbiology, and Immunology 101, 102, 126, 126L, 127, 128
Philosophy 108
Plant Biology—All upper division courses, except 188, 189
Plant Pathology 120, 130
Psychology 121, 122, 123, 124, 128
Soil Science 111
Veterinary Medicine 170
Viticulture and Enology 186
Wildlife, Fish, and Conservation Biology 110, 110L, 111, 111L, 120, 120L, 121, 122, 130, 136, 140, 151

Other Upper Division Courses

There is a limitation on variable-unit courses that may be counted toward the major. Of these courses, up to 4 units of 199 courses may be counted, and no units of 192 or 197T courses may be counted.

Changes to the Optical Science and Engineering Major Program

Lower Division Required Courses

	UNITS
Applied Science Engineering 1.....	4
Mathematics 21A-21B-21C-21D.....	16
Mathematics 22A-22B.....	6
Physics 9A-9B-9C-9D.....	16
Chemistry 2A.....	5
Engineering 6.....	4
Engineering 17.....	4
Engineering 45.....	4
English 1 or 3 or Comparative Literature 1, 2, 3, or 4 or Native American Studies 5.....	4
Communication 1 or 3.....	4
General Education electives.....	16

Total Lower Division Units.....83

Upper Division Required Courses

Optics electives and technical electives should be chosen in consultation with a staff or faculty adviser.

Applied Science Engineering 108A and 108B.....	8
Applied Science Engineering 115, 161, 165, 166, and 169.....	20
Electrical and Computer Engineering 130A, 130B, and 135.....	11
Physics 104A.....	4
Physics 112 or Chemistry 110C.....	4
Chemistry 110A.....	4
Optics electives.....	16
16 units from the following: Applied Science Engineering 116, 167, 170, 172; Biological Sciences 102; Chemistry 110B; Electrical and Computer Engineering 100, 106, 133, 136, 140A, 140B, 150A, 150B	
Technical electives.....	14 or 15
Applied Science Engineering 137 or Engineering 190.....	4 or 3
English 101 or any 102 or any 104.....	4
General Education electives.....	8

Total Upper Division Units.....97

Minimum Units Required for Major180

Changes to the French Major Program

A.B. Major Requirements:

	UNITS
Preparatory Subject Matter.....	4-34
French 1, 2, 3 (or the equivalent).....	0-15
French 21, 22, 23.....	0-15
Linguistics 1 or 4.....	4

Depth Subject Matter.....44

French 100, 101, 102, 103,104.....	20
Two additional upper division French literature courses.....	8
Elective courses in French literature, language, or civilization to be chosen in consultation with undergraduate adviser.....	16

Total Units for the Major..... 48-78

Recommended

French 101, 102, 103, 104, 107, and 160 plus other upper division courses for a total of 45 units for students interested in obtaining a "single subject" teaching credential in California.

New and changed courses for 2003–2004

American Studies (AMS)

158. Technology and the Modern American Body (4)

Lecture/discussion—3 hours; term paper. Prerequisite: Technocultural Studies 1 and either course 1A or 5. The history and analysis of the relationships between human bodies and technologies in modern society. Dominant and eccentric examples of how human bodies and technologies influence one another and reveal underlying cultural assumptions. (Same course as Technocultural Studies 158.) GE credit: ArtHum.—I, III. de la Pena

(new course—eff. Fall 03)

Anthropology (ANT)

148AS. Culture and Political Economy in Contemporary China (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 2 or consent of instructor. Examination of contemporary central aspects of Chinese culture and political economy through reading ethnographic studies on recent transformations in rural and urban areas. Special attention to state power, privatization, popular culture, migration, consumption, village life, city space, class, and gender relations. Taught in China. GE credit: SocSci, Div, Wrt.—I. Zhang

(new course—eff. Fall 03)

Asian American Studies (ASA)

2. Contemporary Issues of Asian Americans (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 1. Introduction to Asian American studies through the critical analysis of the impact of race, racism, ethnicity, imperialism, militarism, and immigration since post-World War II on Asian Americans. Topics may include sexuality, criminality, class, hate crimes, and inter-ethnic relations. GE credit: SocSci, Div, Wrt.—I, II, III.

(change in existing course—eff. Fall 03)

Biological Sciences: Microbiology (MIC)

155L. Bacterial Physiology Lab (4)

Lecture/discussion—1 hour; laboratory—8 hours. Prerequisite: course 140 or 150, 102L, consent of instructor. Physiology and genetics of bacteria. Isolation and characterization of mutant strains. Mapping of mutations by conjugation and transduction studies of control of enzyme synthesis by induction, repression, and catabolite repression.—III. Singer

(change in existing course—eff. Spring 04)

Biological Sciences: Molecular and Cellular Biology (MCB)

257. Cell Proliferation and Cancer Genes (3)

Lecture—1.5 hours; seminar—1.5 hours. Prerequisite: course 221C and 221D or the equivalent. Genetic and molecular alterations underlying the conversion of normal cells to cancers, emphasizing regulatory mechanisms and pathways. Critical reading of the current literature and development of experimental approaches.—I. Radke

(change in existing course—eff. Fall 03)

Biological Sciences: Plant Biology (PLB)

188. Undergraduate Research: Proposal (3)

(cancelled course—eff. Spring 04)

Biotechnology (BIT)

188. Undergraduate Research: Proposal (3)

Lecture/discussion—3 hours. Prerequisite: upper division standing. Preparation and review of a scientific proposal. Problem definition, identification of objectives, literature survey, hypothesis generation, design of experiments, data analysis planning, proposal outline and preparation.—III. Yoder, Powell

(change in existing course—eff. Spring 04)

Education (EDU)

153T. Cultural Diversity and Education (2)

Lecture/discussion—2 hours. Prerequisite: upper division standing. Analysis of research on learning styles among culturally-diverse students with review and evaluation of responsive curricula and classroom teaching techniques. The ethnographic interview as a research tool. Not open for credit to students who have completed course 153.—I, II, III. Merino (new course—eff. Winter 04)

Engineering: Applied Science Davis (EAD)

137. Weapons of Mass Destruction, the Cold War, and Modern Terrorism (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: upper division standing, one course from Physics 1B, 7C, 9C, or 10. Science of nuclear, biological, and chemical weapons related to the Cold War and terrorism. Order of magnitude calculations and modern quandaries of mass destruction. (Same course as Physics 137.) GE credit: SciEng, Wrt.—I. Cox, Freeman (change in existing course—eff. Fall 03)

Engineering: Electrical and Computer (EEC)

100. Circuits II (5)

Laboratory—3 hours; lecture—3 hours; discussion—1 hour. Prerequisite: Engineering 17, course 101 (may be taken concurrently). Theory, application and design of analog circuits. Methods of analysis including frequency response, SPICE simulation, and Laplace transform. Operational amplifiers and design of active filters. Only 3.5 units of credit to students who have completed Engineering 100.—I, II.

(change in existing course—eff. Fall 03)

Engineering: Mechanical (EME)

50. Manufacturing Processes (4)

Lecture/discussion—3 hours; laboratory—3 hours. Prerequisite: Engineering 4 with grade of C or better, Physics 9A. Modern manufacturing methods, safety, manufacturing instructions, computer-aided manufacturing and their role in the engineering design and development process.—I, II. Yamazaki, Schaff

(change in existing course—eff. Fall 03)

History (HIS)

203. Seminar Research (4)

(cancelled course—eff. Fall 03)

203A. Research Seminar (4)

Seminar—3 hours; tutorial—1 hour. Designed for students preparing for higher degrees in history. Individual research and analysis resulting in substantial research paper of publishable quality. Completion required of all Ph.D. candidates. The three courses must be taken in continuous sequence, ordinarily during second year.—I. Bossler, Halttunen, Hagen (new course—eff. Fall 03)

203B-203C. Research Seminar (4-4)

Seminar—3 hours; tutorial—1 hour. Prerequisite: course 203A. Designed for students preparing for higher degrees in history. Individual research and analysis resulting in substantial research paper of publishable quality. Completion required of all Ph.D. candidates. The three courses must be taken in continuous sequence, ordinarily during second year. (Deferred grading only, pending completion of sequence.)—II, III. Bossler, Halttunen, Hagen

(new course—eff. Winter 04)

Linguistics (LIN)**7. Computational Linguistics (4)**

(cancelled course—eff. Winter 04)

Management (MGT, MGP)**263. Derivative Securities (3)**

Lecture/discussion—3 hours. The behavior of options, futures, and other derivative securities markets and how public agencies, business and others use those markets. Trading strategies involving options, swaps, and financial futures contracts. Pricing of derivative securities, primarily by arbitrage methods.—III. Clark

(change in existing course—eff. Fall 03)

Medicine: Medical Sciences (MDS)**400E. Application of Medical Principles (1)**

(cancelled course—eff. Fall 03)

421B. Doctoring 2 (4.5)

Discussion—2 hours; lecture/discussion—2 hours; internship—1 hour. 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. 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.)—I. Stevenson

(new course—eff. Fall 03)

421C-421D. Doctoring 2 (3.5-2.5)

Discussion—2 hours; lecture/discussion—2 hours; internship—1 hour. Prerequisite: approval of the Committee on Student Progress. Application of multidisciplinary basic, social and clinical science concepts to clinical cases in small group discussions. 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.)—II, III. Stevenson

(new course—eff. Winter 04)

430B-430C-430D. Doctoring 3 (2-2-2)

Discussion—2 hours. 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. 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.)—I, II, III. Wilkes

(change in existing course—eff. Fall 03)

Medicine: Biological Chemistry (BCM)**410A. Molecular and Cell Biology (3.5)**

Lecture—4 hours. Prerequisite: approval by Committee on Student Evaluation and Promotion. Basic biochemistry of proteins and nucleic acids, followed by molecular genetics, regulation of gene expression, biomembranes and structural proteins. Applications to clinically relevant systems, particularly cystic fibrosis, synaptic conductance, muscular dystrophy, and oncogenes and cell proliferation control. (P/F grading only.)—I. Voss

(change in existing course—eff. Fall 02)

Medicine: Epidemiology and Preventive Medicine (EPP)**421. Principles of Epidemiology and Preventive Medicine (2.5)**

(cancelled course—eff. Fall 03)

Medicine: Family and Community Medicine (FAP)**340. Clinical Preceptorship for FNP/PA Students (19)**

Clinical activity—13 hours. Prerequisite: student in the Family Nurse Practitioner/Physician Assistant Program. Hands-on clinical experience including supervised patient care, development of clinical skills, assessment and management of patients in the medical ambulatory care setting. May be repeated twice for credit with consent of instructor. (Deferred grading only, pending completion of sequence. P/F grading only.)—I, II, III, IV. White, Stewart

(change in existing course—eff. Fall 03)

Medicine: Internal Medicine (IMD)**401B. Physical Diagnosis Practicum (1)**

(cancelled course—eff. Fall 03)

401C. Physical Diagnosis Practicum (1.5)

(cancelled course—eff. Winter 04)

401D. Physical Diagnosis Practicum (3)

(cancelled course—eff. Spring 04)

Medicine: Obstetrics and Gynecology (OBG)**494. Shifa Clinic (1-6)**

Clinical activity—8 hours; lecture—1-2 hours; project—1-2 hours; discussion—1 hour. Prerequisite: medical student in good standing. Interaction with patients from multiple ethnic and cultural backgrounds under the direct supervision of a physician/preceptor. Women's health issues and primary care issues in a diversely mixed population. May be repeated up to 3 times for credit. (P/F grading only.)—I, II, III, IV. Yasmeen

(change in existing course—eff. Summer 03)

Medicine: Ophthalmology (OPT)**442. Ophthalmology Clerkship (3)**

Clinical activity—40 hours. Prerequisite: fourth-year medical student or third-year medical student who has completed clerkships in medicine and surgery with consent of instructor and adviser. Ocular disease diagnosis and management relevant to the clinical practice of future primary care physicians and others. (P/F grading only.)—I, II, III, IV.

(change in existing course—eff. Spring 03)

Medicine: Psychiatry (PSY)**402. Human Sexuality (1)**

(cancelled course—eff. Spring 04)

Philosophy (PHI)**121. Topics in Metaphysics (4)**

(cancelled course—eff. Fall 03)

122. Topics in Theory of Knowledge (4)

(cancelled course—eff. Fall 03)

133. Topics in Mathematical Logic (4)

(cancelled course—eff. Fall 03)

189A-K. Special Topics in Philosophy (4)

Lecture/discussion—3 hours; extensive writing. Prerequisite: one course in the area of the special topic. Special topics in (A) History of Philosophy, (B) Metaphysics, (C) Theory of Knowledge, (D) Ethics, (E) Political Philosophy, (F) Philosophy of Law, (G) Aesthetics, (H) Philosophy of Mind, (I) Philosophy of Science, (J) Philosophy of Language, (K) Logic. May be repeated up to 8 units of credit. Not offered every year.

(new course—eff. Fall 03)

190. Special Topics in the History of Philosophy (4)

(cancelled course—eff. Fall 03)

Physics (PHY)**9A. Classical Physics (5)**

Lecture—3 hours; laboratory—2.5 hours; discussion—1 hour.
Prerequisite: Mathematics 21B. Introduction to general principles and analytical methods used in physics for physical science and engineering majors. Classical mechanics. Only 2 units of credit to students who have completed course 1A or 7B. Not open for credit to students who have completed course 9HA.—III.

(change in existing course—eff. Spring 04)

9HA. Honors Physics (5)

Lecture—3 hours; discussion/laboratory—4 hours. Prerequisite: Mathematics 21B (may be taken concurrently) or consent of instructor. Classical mechanics. Same material as course 9A in greater depth. For students in physical sciences, mathematics, and engineering. Only 2 units of credit to students who have completed course 7B. Not open for credit to students who have completed course 9A.—I.

(change in existing course—eff. Fall 03)

9HB. Honors Physics (5)

Lecture—3 hours; discussion/laboratory—4 hours. Prerequisite: Physics 9HA or 9A, Mathematics 21C (may be taken concurrently). Special relativity, thermal physics. Continuation of course 9HA. Only 2 units of credit to students who have completed course 7A. Not open for credit to students who have completed course 9B or 9D.—II.

(change in existing course—eff. Winter 04)

9HC. Honors Physics (5)

Lecture—3 hours; discussion/laboratory—4 hours. Prerequisite: course 9HB and Mathematics 21D (may be taken concurrently). Waves, sound, optics, quantum physics. Continuation of Physics 9HB. Only 2 units of credit to students who have completed course 7C. Not open for credit to students who have completed course 9B or 9D.—III.

(change in existing course—eff. Spring 04)

9HD. Honors Physics (5)

Lecture—3 hours; discussion/laboratory—4 hours. Prerequisite: course 9HC and Mathematics 21D. Electricity and magnetism. Continuation of Physics 9HC. Not open for credit to students who have completed course 9C.—I.

(change in existing course—eff. Fall 03)

9HE. Honors Physics (5)

Lecture—3 hours; discussion/laboratory—4 hours. Prerequisite: course 9HD and Mathematics 22B (may be taken concurrently). Application of quantum mechanics. Not open for credit to students who have completed course 9D.—II.

(change in existing course—eff. Winter 04)

137. Weapons of Mass Destruction, the Cold War, and Modern Terrorism (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: upper division standing, one course from 1B, 7C, 9C, or 10. Science of nuclear, biological, and chemical weapons related to the Cold War and terrorism. Order of magnitude calculations and modern quandaries of mass destruction. (Same course as Applied Science Engineering 137.) GE credit: SciEng, Wrt.—I. Cox, Freeman

(change in existing course—eff. Fall 03)

Political Science (POL)**220. Seminar in Political Theory (4)**

Seminar—3 hours; term paper. Prerequisite: graduate standing. Introduction to political theory and current debates over its study. Readings from and textual interpretations of political theory including the Federalist Papers and major works by thinkers such as Plato, Aristotle, Machiavelli, Hobbes, Locke, Rousseau, and Rawls. Other readings addressing issues of textual interpretation.—I. Scott

(new course—eff. Fall 03)

Technocultural Studies (TCS)**5. Media Archaeology (4)**

Lecture/discussion—3 hours; term paper. Evolution of media technologies and practices beginning in the 19th Century as they relate to contemporary digital arts practices. Special focus on the reconstruction of the social and artistic possibilities of lost and obsolete media technologies. GE credit: ArtHum.—III.

(new course—eff. Fall 03)

6. Technoculture and the Popular Imagination (4)

Lecture—3 hours; extensive writing. Issues of technological and scientific developments as conveyed through mass media and popular culture with special attention to public spectacle, exhibitions, broadcasts, performances, demonstrations and literary fictions and journalistic accounts. GE credit: ArtHum.—III.

(new course—eff. Fall 03)

100. Experimental Digital Cinema I (4)

Lecture/discussion—3 hours; laboratory—3 hours. Experimental approaches to the making of film and video in the age of digital technologies. Opportunities for independent producers arising from new media. Instruction in technical, conceptual and creative skills for taking a project from idea to fruition.—II. Hershman

(new course—eff. Winter 03)

101. Experimental Digital Cinema II (4)

Lecture/discussion—3 hours; laboratory—3 hours. Prerequisite: course 100. Continuation of course 100 with further exploration of digital cinema creation. Additional topics include new modes of distribution, streaming, installation and exhibition.—III. Hershman

(new course—eff. Spring 04)

151. Topics in Virtuality (4)

Lecture/discussion—3 hours; term paper. Prerequisite: course 1. Social, political, economic, and aesthetic factors in virtual reality. Artificial environments, telepresence, and simulated experience. Focus on contemporary artists' work and writing.—III. Dyson

(new course—eff. Fall 03)

158. Technology and the Modern American Body (4)

Lecture/discussion—3 hours; term paper. Prerequisite: course 1 and either American Studies 1 or 5. The history and analysis of the relationships between human bodies and technologies in modern society. Dominant and eccentric examples of how human bodies and technologies influence one another and reveal underlying cultural assumptions. (Same course as American Studies 158.) GE credit: ArtHum.—I, III. de la Pena

(new course—eff. Fall 03)

Veterinary Medicine (VMD)**437A. Veterinary Ethics and Law (1.3)**

Discussion—10 sessions; project. 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 problem-based learning.—I. Tannenbaum

(change in existing course—eff. Fall 03)

437B. Veterinary Ethics and Law (0.8)

(cancelled course—eff. Fall 03)