



FALL ADDENDUM
TO THE GENERAL CATALOG AND
CLASS SCHEDULE & REGISTRATION GUIDE
20**01**

Correction to Orientation Session

September 25, Tuesday

- 9:00 to 11:30 a.m.
Orientation for New Reentry Students in the Cabernet Room, Silo Union. For more information, call (530)752-3000

Updates to Degree Programs

The program in Agricultural Systems and Environment has changed to Agricultural Management and Rangeland Resources.

The program in Chicana/Chicano (Mexican-American) Studies has changed to Chicana/Chicano Studies.

Correction to the Exercise Biology Major Program

B.S. Major Requirements:

| | UNITS |
|--|----------------|
| Preparatory Subject Matter | 60-74 |
| Biological Sciences 1A-1B-1C | 15 |
| Chemistry 2A-2B-2C | 15 |
| Chemistry 8A-8B or 118A-118B-118C | 6-12 |
| Mathematics 16A-16B-16C or 21A-21B-21C-21D | 9-16 |
| Physics 7A-7B-7C or 9A-9B-9C | 12 |
| Statistics 13, 32, 100, or 102 | 3-4 |
| Psychology 1 is highly recommended. | |
| Mathematics 21A-21B-21C-21D, 22A-22B, Physics 9A-9B-9C-9D and Engineering 5, 35 are recommended for students interested in the Biomechanics option. | |
| Depth Subject Matter | 48-51 |
| Biological Sciences 101, 102, 103, 104 | 13 |
| Neurobiology, Physiology, and Behavior | 5 |
| Cell Biology and Human Anatomy 101 and 101L | 14 |
| Exercise Biology 101, 102, 103, 104L | 14 |
| Completion of one Option listed below, or with adviser approval, one course from each option, including 2 units of laboratory | 9-12 |
| Physiology Option | |
| Exercise Biology 110 | 3 |
| Exercise Biology 111 | 3 |
| Select 1 course from Exercise Biology 113, 116; Neurobiology, Physiology, and Behavior 112, 113, 140 | 3-4 |
| Biomechanics Option | |
| Exercise Biology 115 | 3 |
| Exercise Biology 126 | 3 |
| Select 1 course from Exercise Biology 113; Engineering 102; Engineering: Applied Science 115; Neurobiology, Physiology, and Behavior 112 | 3-4 |
| Applied Exercise Biology Option | |
| Exercise Biology 112 and 117, or 133 and 135 | 6-7 |
| Select 1 course from Exercise Biology 116, 118; Nutrition 101, 111 | 3-5 |
| No variable unit courses or Exercise Biology 146, 146L, 147L, 148, 148L or 149L may be used to fulfill these requirements. Consult your adviser regularly. | |
| Total Units for the Major | 108-125 |

New Emphasis in the Biological Sciences Major

Marine Biology emphasis15-17

- (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; Wildlife, Fish and Conservation Biology 157 3
- (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
- (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 8-10

New Graduate Group Information

Exercise Science (A Graduate Group)

Charles Stebbins, Ph.D., Chairperson of the Group
Group Office, 145 Briggs Hall (530-752-9091)
World Wide Web: <http://www.dbs.ucdavis.edu/grad/exs>

Faculty

Ezra A. Amsterdam, Ph.D., Professor (*Internal Medicine*)
Richard Carlsen, Ph.D., Professor (*Human Physiology*)
Fadi Fathallah, Ph.D., Assistant Professor (*Biological and Agricultural Engineering*)
Charles A. Fuller, Ph.D., Professor (*Neurobiology, Physiology, and Behavior*)
Dave Hawkins, Ph.D., Associate Professor (*Exercise Science*)
James H. Jones, Ph.D., Professor (*Surgical and Radiological Sciences*)
Thomas Jue, Ph.D., Professor (*Biological Chemistry*)
Marc Kaufman, Ph.D., Professor (*Internal Medicine*)
David D. Kilmer, Ph.D., Associate Professor (*Physical Medicine and Rehabilitation*)
Craig M. McDonald, Ph.D., Associate Professor (*Physical Medicine and Rehabilitation*)
Roger McDonald, Ph.D., Professor (*Nutrition*)
Carol Meredith, Ph.D., Professor (*Exercise Science*)
Melvin R. Ramey, Ph.D., Professor (*Civil and Environmental Engineering*)
Edward S. Schelegle, Ph.D., Assistant Professor (*Anatomy, Physiology and Cell Biology*)
Charles Stebbins, Ph.D., Professor (*Internal Medicine*)
Susan M. Stover, Ph.D., Professor (*Anatomy, Physiology and Cell Biology*)
Viviane Ugalde, Ph.D., Professor (*Physical Medicine and Rehabilitation*)
W. Jeffrey Weidner, Ph.D., Professor (*Neurobiology, Physiology, and Behavior*)
Keith R. Williams, Ph.D., Associate Professor (*Exercise Science*)

Emeriti Faculty

William C. Adams, Ph.D., Professor Emeritus
Edmund Bernauer, Ph.D., Professor Emeritus

Affiliated Faculty

George Brooks, Ph.D., Professor (*Integrative Biology - UC Berkeley*)
Robert G. Holly, Ph.D., Senior Lecturer (*Exercise Science*)
Paul Salitsky, Ph.D., Lecturer (*Exercise Science*)
Marta Van Loan, Ph.D., Research Psychologist (*Nutrition*)
Charles Wade, Ph.D., Adjunct Professor (*Neurobiology, Physiology, and Behavior*)

Graduate Study. The Graduate Group in Exercise Science offers a program of study and research leading to an M.S. degree. Advanced training is provided in two areas of emphasis. The Exercise Physiology Area involves the study of functional, metabolic, nutritional, and regulatory aspects of the cardiovascular, respiratory, and skeletal muscle systems as they relate to movement and exercise. The Biomechanics Area includes the study of skeletal muscle mechanics, motor control, biomechanical analysis of human movement, tissue mechanics, motor control, and clinical biomechanics.

Graduate Advisers. D. Hawkins, E. Schelegle, K. Williams

New Program Information

Natural Sciences

(College of Letters and Science)

Advising Center, 174 Physics/Geology Building (530-752-9100)

Committee in Charge

Howard W. Day, Ph.D. (*Geology*)
 Charles P. Nash, Ph.D. (*Chemistry*)
 J. Richard Pomeroy, Ph.D. (*Education*)
 Wendell H. Potter, Ph.D. (*Physics*)
 Thomas L. Rost, Ph.D. (*Plant Biology*)

The Major Program

Natural Sciences is an interdisciplinary major that provides significant breadth in biology, chemistry, earth sciences, physics and mathematics while offering additional depth in two of the natural sciences. It is especially designed to meet the needs of prospective science teachers, but will also serve students who wish to acquire training in more than one science. The major is sponsored by the Department of Geology.

The Program. The Natural Sciences curriculum offers an unusually broad training in science and mathematics. All students must complete a one year sequence in calculus, a course in statistics and one year sequences in chemistry, earth science, life science and physics. Each student will complete depth courses in two of these sciences. Prospective teachers may use these depth courses as preparation for primary and supplementary teaching credentials in Integrated Science.

Career Alternatives. The study of natural sciences prepares a student to meet the subject matter requirements for the Integrated Science Teaching Credential in California as well as a variety of other careers. Students whose goals include business, journalism, law, or medicine may acquire a broad background in science through this curriculum.

B.S. Major Requirements:

| | UNITS |
|---|------------|
| Preparatory Subject Matter | 68 |
| Chemistry 2A, 2B, 2C | 15 |
| Biological Sciences 1A, 1B, 1C | 15 |
| Geology 3, 3L, 50, 50L, 60 | 13 |
| Mathematics 16A, 16B, 16C | 9 |
| Physics 7A, 7B, 7C | 12 |
| Statistics 100 or 102 | 4 |
| Depth Subject Matter | 42 |
| Concentration (choose from among the four fields of concentration listed below) | 27 |
| Supplementary Field (choose from among the four fields listed below. May not include the same field as the concentration) | 15 |
| Total Units for the Major | 110 |
| Fields of Concentration: | |
| <i>Chemistry</i> | 27-33 |
| Chemistry 8A, 8B or 118A, 118B, 118C ... | 6-12 |
| Chemistry 105, 107A, 107B, 110A, 124A ... | 17 |
| Chemistry 197 or 199 | 4 |
| <i>Earth Science</i> | 27 |
| Geology 62, 100, 100L, 105N, 108N, 109, 109L, 116 | 20 |
| Soil Science 100 | 4 |
| Geology 199 | 3 |
| <i>Life Science</i> | 27-34 |
| Chemistry 8A, 8B or 118A, 118B, 118C ... | 6-12 |
| Biological Sciences 101 | 4 |
| Evolution and Ecology 100, 101 | 8 |
| Neurobiology, Physiology, and Behavior 101 ... | 5 |
| Neurobiology, Physiology, and Behavior 101L or Molecular and Cellular Biology 160L | 3-4 |
| One 199 course from Biological Sciences, Evolution and Ecology, Molecular and Cellular Biology, or Neurobiology, Physiology, and Behavior | 1 |
| <i>Physics</i> | 27 |
| Chemistry 107A, 110A | 7 |
| Geology 161, 162N | 6 |
| Physics 108, 122 | 7 |
| Physics 137 or 160 | 3 |
| Physics 199 | 4 |

Supplementary Fields:

| | |
|---|----|
| <i>Chemistry</i> | 15 |
| Chemistry 105, 107A, 118A, 124A | 14 |
| Approved elective | 1 |
| (Other Chemistry or related science courses may be substituted with the prior approval of the major adviser.) | |
| <i>Earth Science</i> | 15 |
| Geology 108, 109, 109L, 116, 138 | 14 |
| Approved elective | 1 |
| (Other Geology or related science courses may be substituted with the prior approval of the major adviser.) | |
| <i>Life Science</i> | 15 |
| Biological Sciences 101* | 4 |
| Evolution and Ecology 100 | 4 |
| Neurobiology, Physiology, and Behavior 101 .. | 5 |
| Approved electives | 2 |
| (Other Biological Sciences or related science courses may be substituted with the prior approval of the major adviser.) | |
| *Note: Students pursuing a concentration in earth science or physics may not have had the necessary prerequisites in organic chemistry. | |
| <i>Physics</i> | 15 |
| Physics 122 | 3 |
| Chemistry 107A, 110A | 7 |
| Geology 161 | 3 |
| Approved electives | 2 |
| (Other Physics or related science courses may be substituted with the prior approval of the major adviser.) | |

Major Advisers: C. P. Nash (*Chemistry*), H. W. Day (*Geology*), W. H. Potter (*Physics*)

Changes to the Education Minor Program

Minor Program Requirements:

Education theory is considered to be the foundation for undergraduates to elect as a minor if they wish to (1) major in an allied program, (2) obtain a teaching credential, (3) obtain a master's degree in education or related field, (4) obtain a Ph.D. degree in education, (5) enter a profession that focuses on work with people, (6) seek employment in a governmental or industrial training program, or (7) obtain a better understanding of the issues and concerns of public and private education.

At least 12 units of the 20-unit minimum for the minor must be in Education. The remaining units for the minor may be in Education or a related field.

| | UNITS |
|-------------------------------|-----------|
| Education | 20 |
| Education 100, 110, 120 | 12 |
| Elective courses | 8 |

The remaining 8 units may be taken from the following courses in Education with the option of selecting courses from the list of approved elective courses outside of Education:

Education:
 Education 115, 130, 151, 152, 153, 163, 192

Approved courses outside of Education:
 African American and African Studies 130, American Studies 152, Asian American Studies 101, Human Development 100A, 100B, 101, Linguistics 173, Psychology 130, 132, Sociology 124, Spanish 116, 117

Changes to the Music Major Requirements

Music

(College of Letters and Science)
 Ross Bauer, Ph.D., Chairperson of the Department
 Department Office, 112 Music Building
 (530-752-5537; Fax: 752-0983)
 World Wide Web: <http://music.ucdavis.edu>

The Major Program

The Bachelor of Arts degree in music provides both a broad liberal arts education and the skills necessary to explore music through its history, composition, theory, and performance. Students majoring in music may choose from three tracks in the major: composition and theory, music history, or performance. Students in each of these tracks take a common core of courses before taking required specialized courses and choosing from a group of elective courses. Students following the track in Composition and Theory take advanced theory courses and/or seminars in composition; students following the track in Music History take specialized seminars in music history (recent topics include the music of Berlioz and Film Music); and students following the track in Performance take an increased number of lessons and performance ensemble courses as well as conducting. Music majors who intend to pursue graduate studies in music are encouraged to satisfy the requirements of one of the honors programs in music.

Students are encouraged to consider the Education Abroad Program at some point during their studies, either for a single quarter or an entire year.

A. B. Major Requirements

| | |
|---|--------------|
| | UNITS |
| Preparatory Subject Matter | 27-45 |
| Music 2A, 2B, 2C, 6A, 6B, 6C, 16A, 16B, 16C, 24A, 24B, 24C* | 18-30 |
| Music 7A, 7B, 7C, 17A, 17B, 17C** | 9-15 |
| * Note: Students may pass out of one or more quarters of Music 2A-C, and 16A-C through examination | |
| ** Note: Students may pass out of one or more quarters of Music 17A-C through examination. | |
| Depth Subject Matter | 36-37 |
| Choose upper division courses from one of the following tracks: | |
| <i>Track 1: Theory/Composition</i> | 36-37 |
| Music 124A, 124B | 6 |
| At least 11 units selected from Music 130, 131, 140, 141, 142, 143, 144, 145, 146, 147, 154 | 11 |
| Music 101A, 101B | 8 |
| Music 103 or 199 (for composers); or Music 122 (for theorists)*** | 3-4 |
| At least 8 units selected from Music 102, 107A, 107B, 107C, 108A, 108B, 113, 114, 122, 198, 199 | 8 |
| *** Note: Music 103 and 199 may be taken only once for credit toward the major. | |
| <i>Track 2: Music History</i> | 37 |
| Music 124A, 124B | 6 |
| At least 11 units selected from Music 130, 131, 140, 141, 142, 143, 144, 145, 146, 147, 154 | 11 |
| Two quarters of Music 121 (on different subjects) | 8 |
| At least 12 units selected from Music 101A, 101B, 102, 107A, 107B, 107C, 108A, 108B, 113, 114, 121, 122, 198, 199 | 12 |
| <i>Track 3: Music Performance</i> | 37 |
| Music 124A, 124B | 6 |
| At least 19 units selected from Music 130, 131, 140, 141, 142, 143, 144, 145, 146, 147, 154 | 19 |
| At least 12 units selected from Music 101A, 101B, 102, 107A, 107B, 107C, 108A, 108B, 113, 114, 121, 122, 198, 199 | 12 |
| Total Units for the Major | 63-82 |

Honors Programs. Students who wish to pursue particularly intensive studies in music should elect one of the following honors programs in place of one of the tracks above:

| | |
|---|-------|
| <i>Theory/Composition Honors</i> | 45-49 |
| Music 124A, 124B | 6 |
| At least 11 units selected from Music 130, 131, 140, 141, 142, 143, 144, 145, 146, 147, 154 | 11 |
| Music 101A, 101B | 8 |
| Two quarters of Music 194H for a total of at least 6 units resulting in a Senior composition or theory thesis | 6 |
| Select 14-18 units from Music 102, 107A, 107B, 107C, 108A, 108B, 113, 114, 122 | 14-18 |
| <i>Music History Honors</i> | 41-45 |
| Music 124A, 124B | 6 |
| At least 11 units selected from Music 130, 131, 140, 141, 142, 143, 144, 145, 146, 147, 154 | 11 |
| Music 101A, 101B | 8 |
| Two quarters of Music 194H for a total of at least 6 units resulting in a Senior thesis | 6 |
| Select 10-14 units from Music 108A, 121, 122 | 10-14 |

Foreign Language Requirement. Students contemplating graduate study in music are advised to consider pursuing foreign language study beyond the elementary level.

Diagnostic Exams are given before admission into Music 6A-6B-6C (Music 3A-3B may be recommended as an alternative). Diagnostic exams are also given for Music 16A-16B-16C and 17A-17B-17C at the beginning of each year. Transfer students should take the advisory placement exams in theory and music history given during orientation week.

Beginning and transfer students are required to take Music 2A-2B-2C (Keyboard Competence) unless they can pass out of one or more of the classes by demonstrating proficiency through a diagnostic exam given at the beginning of each quarter. Students learn 1) four-part keyboard harmony in all major and minor keys; 2) moderate fluency with figured bass at the keyboard; 3) major and minor scales with proper fingering; ability to sight read simple piano music and Bach chorales.

Changes to Final Examination Codes for Fall 2001

| CRN | DROP | Course Subj/No. | Activity Type | Section (part) | Title | Units | Instructor | Day | Time | Location Bldg/Room | Enrl Cap* | Exam Code |
|--|------|--------------------|------------------|-------------------|--------------------------|-------|--------------------|-----|------------|-----------------------|--------------|--------------|
| 14917 | | BIS 101 | LEC | 002 | Genes & Gene Expression | 4.0 | Sanders, MF | TR | 0610-0800P | WELLMN 2 | 200 | 3 |
| 40748 | | CMN 142 | LEC | 001 | News Pol Pract Effects | 4.0 | Theobald, J | M | 0610-1000P | EVERSN 176 | 120 | 4 |
| ** PASS 1: OPEN TO MAJORS ** | | | | | | | | | | | | |
| 40502 | Δ | ECN 190 | DIS | 001 | Topics In Economics | 4.0 | Hoover, KD | R | 0610-0900P | HART 1130 | 49 | 3 |
| 20257 | Δ | EDU 120 | COM | 001 | Philos & Social Found | 4.0 | Fox, SM | TR | 0610-0800P | WELLMN 216 | 65 | 3 |
| 19829 | | ECS 030 | COM | B01 | Intro Prog&Prob Solving | 4.0 | The Staff | TBA | TBA | | | |
| | | | | | | | | TR | 0610-0730P | STORER 1322 | 48 | 3 |
| | | | | | | | | W | 0800-0850A | HOAGLD 108 | | |
| 19830 | | ECS 030 | COM | B02 | Intro Prog&Prob Solving | 4.0 | The Staff | TR | 0610-0730P | STORER 1322 | 46 | 3 |
| | | | | | | | | F | 0800-0850A | WICKSN 1020 | | |
| 19831 | | ECS 030 | COM | B03 | Intro Prog&Prob Solving | 4.0 | The Staff | TR | 0610-0730P | STORER 1322 | 46 | 3 |
| | | | | | | | | W | 0610-0700P | HOAGLD 108 | | |
| 19832 | | ECS 030 | COM | C01 | Intro Prog&Prob Solving | 4.0 | The Staff | MW | 0610-0730P | STORER 1322 | 48 | 4 |
| | | | | | | | | F | 0800-0850A | BAINER 1132 | | |
| 19833 | | ECS 030 | COM | C02 | Intro Prog&Prob Solving | 4.0 | The Staff | MW | 0610-0730P | STORER 1322 | 46 | 4 |
| | | | | | | | | W | 0800-0850A | WICKSN 1020 | | |
| 19834 | | ECS 030 | COM | C03 | Intro Prog&Prob Solving | 4.0 | The Staff | MW | 0610-0730P | STORER 1322 | 46 | 4 |
| | | | | | | | | R | 0800-0850A | HUTCH 102 | | |
| ** ECS 30 (C SERIES)-PASS 1: RESTRICTED TO COMPUTER SCIENCE, COMPUTER SCIENCE ENGINEERING, COMPUTER ENGINEERING, ELECTRICAL ENGINEERING AND ELECTRICAL ENGINEERING/ MATERIAL SCIENCE MAJORS ** ENGINEERING MAJORS ** | | | | | | | | | | | | |
| 19908 | | ECS 110 | COM | B01 | Data Structures & Prog | 4.0 | The Staff | TR | 0610-0730P | WELLMN 26 | 60 | 3 |
| | | | | | | | | F | 0310-0400P | CRUESS 107 | | |
| 19909 | | ECS 110 | COM | B02 | Data Structures & Prog | 4.0 | The Staff | TR | 0610-0730P | WELLMN 26 | 60 | 3 |
| | | | | | | | | F | 0510-0600P | CRUESS 107 | | |
| 19922 | | ECS 154A | COM | A01 | Computer Architecture | 4.0 | The Staff | TR | 0610-0730P | WELLMN 6 | 60 | 3 |
| | | | | | | | | R | 0800-0850A | TEMCL3 3 | | |
| 19923 | | ECS 154A | COM | A02 | Computer Architecture | 4.0 | The Staff | TR | 0610-0730P | WELLMN 6 | 60 | 3 |
| | | | | | | | | F | 0310-0400P | WELLMN 226 | | |
| 19924 | | ECS 154B | COM | 001 | Computer Architecture | 4.0 | The Staff | TR | 0610-0730P | ART 204 | 70 | 3 |
| | | | | | | | | F | 0310-0400P | TEMCL3 3 | | |
| ** PASS 1: RESTRICTED TO COMPUTER SCIENCE, COMPUTER SCIENCE ENGINEERING AND GRADUATE COMPUTER SCIENCE MAJORS ** | | | | | | | | | | | | |
| 40611 | Δ | ECS 160 | COM | A01 | Intro Software Eng | 4.0 | The Staff | MW | 0610-0730P | WELLMN 106 | 60 | 4 |
| | | | | | | | | F | 1100-1150A | CHEM 166 | | |
| 41073 | Δ | ECS 160 | COM | A02 | Intro Software Eng | 4.0 | The Staff | MW | 0610-0730P | WELLMN 106 | 60 | 4 |
| | | | | | | | | F | 1000-1050A | CHEM 166 | | |
| ** PASS 1: RESTRICTED TO COMPUTER SCIENCE, COMPUTER SCIENCE ENGINEERING MAJORS ** | | | | | | | | | | | | |
| 21916 | Δ | ENL 104D | LED | 001 | Writing in Education | 4.0 | The Staff | MW | 0610-0730P | OLSON 125 | 25 | 4 |
| 40758 | | ENL 160 | LEC | 001 | Film As Narrative | 4.0 | Hoffman, MJ | M | 0610-0900P | OLSON 206 | 120 | 4 |
| | | | | | | | | W | 0410-0600P | OLSON 206 | | |
| 40806 | Δ | FST 010 | LEC | 001 | Food, Folklore, & Health | 3.0 | Guinard, JX | TR | 0610-0730P | CHEM 194 | 440 | 3 |
| ** ATTENDANCE ON THE FIRST DAY OF CLASS IS MANDATORY. ENROLLMENT AFTER THE FIRST DAY MUST BE APPROVED BY THE INSTRUCTOR ** | | | | | | | | | | | | |
| 40926 | Δ | HUM 010 | COM | A01 | Intro to Film Studies | 4.0 | Van Den Abbeele, G | TR | 0610-0700P | SOCSCI 1100 | 30 | 3 |
| | | | | | | | | T | 0710-1000P | SOCSCI 1100 | | |
| | | | | | | | | W | 0310-0400P | OLSON 207 | | |
| 40928 | Δ | HUM 010 | COM | A02 | Intro to Film Studies | 4.0 | Van Den Abbeele, G | TR | 0610-0700P | SOCSCI 1100 | 30 | 3 |
| | | | | | | | | T | 0710-1000P | SOCSCI 1100 | | |
| | | | | | | | | W | 0410-0500P | BAINER 1120 | | |
| 40929 | Δ | HUM 010 | COM | A03 | Intro to Film Studies | 4.0 | Van Den Abbeele, G | TR | 0610-0700P | SOCSCI 1100 | 30 | 3 |
| | | | | | | | | T | 0710-1000P | SOCSCI 1100 | | |
| | | | | | | | | W | 0510-0600P | BAINER 1120 | | |
| 40930 | Δ | HUM 010 | COM | A04 | Intro to Film Studies | 4.0 | Van Den Abbeele, G | TR | 0610-0700P | SOCSCI 1100 | 30 | 3 |
| | | | | | | | | T | 0710-1000P | SOCSCI 1100 | | |
| | | | | | | | | W | 0610-0700P | BAINER 1120 | | |
| 40931 | Δ | HUM 010 | COM | A05 | Intro to Film Studies | 4.0 | Van Den Abbeele, G | TR | 0610-0700P | SOCSCI 1100 | 30 | 3 |
| | | | | | | | | T | 0710-1000P | SOCSCI 1100 | | |
| | | | | | | | | R | 0310-0400P | STORER 1342 | | |
| 40932 | Δ | HUM 010 | COM | A06 | Intro to Film Studies | 4.0 | Van Den Abbeele, G | TR | 0610-0700P | SOCSCI 1100 | 30 | 3 |
| | | | | | | | | T | 0710-1000P | SOCSCI 1100 | | |
| | | | | | | | | R | 0410-0500P | HOAGLD 108 | | |
| 40933 | Δ | HUM 010 | COM | A07 | Intro to Film Studies | 4.0 | Van Den Abbeele, G | TR | 0610-0700P | SOCSCI 1100 | 30 | 3 |
| | | | | | | | | T | 0710-1000P | SOCSCI 1100 | | |
| | | | | | | | | R | 0510-0600P | HART 1116 | | |
| 40934 | Δ | HUM 010 | COM | A08 | Intro to Film Studies | 4.0 | Van Den Abbeele, G | TR | 0610-0700P | SOCSCI 1100 | 30 | 3 |
| | | | | | | | | T | 0710-1000P | SOCSCI 1100 | | |
| | | | | | | | | F | 0900-0950A | OLSON 163 | | |
| 40935 | Δ | HUM 010 | COM | A09 | Intro to Film Studies | 4.0 | Van Den Abbeele, G | TR | 0610-0700P | SOCSCI 1100 | 30 | 3 |
| | | | | | | | | T | 0710-1000P | SOCSCI 1100 | | |
| | | | | | | | | F | 1000-1050A | VEIMYR 116 | | |
| 40937 | Δ | HUM 010 | COM | A10 | Intro to Film Studies | 4.0 | Van Den Abbeele, G | TR | 0610-0700P | SOCSCI 1100 | 30 | 3 |
| | | | | | | | | T | 0710-1000P | SOCSCI 1100 | | |
| | | | | | | | | F | 1100-1150A | VEIMYR 116 | | |
| 41163 | Δ | HUM 010 | COM | A11 | Intro to Film Studies | 4.0 | Van Den Abbeele, G | TR | 0610-0700P | SOCSCI 1100 | 30 | 3 |
| | | | | | | | | T | 0710-1000P | SOCSCI 1100 | | |
| | | | | | | | | F | 1210-0100P | OLSON 261 | | |
| 41164 | Δ | HUM 010 | COM | A12 | Intro to Film Studies | 4.0 | Van Den Abbeele, G | TR | 0610-0700P | SOCSCI 1100 | 30 | 3 |
| | | | | | | | | T | 0710-1000P | SOCSCI 1100 | | |
| | | | | | | | | F | 0110-0200P | OLSON 261 | | |
| 28549 | | MAT 016A | LEC | 001 | Short Calculus | 3.0 | The Staff | MWF | 0610-0700P | WELLMN 2 | 200 | 4 |
| 34621 | | PHY 001A | LEC | 001 | Principles Physics | 3.0 | The Staff | MWF | 0610-0700P | RESSLR 66 | 187 | 4 |
| 34763 | Δ | PHY 009B | COM | D01 | Classical Physics | 4.0 | The Staff | TR | 0610-0730P | RESSLR 66 | 22 | 3 |
| | | | | | | | | T | 0740-0830P | BAINER 1128 | | |

| | | | | | | | | | | | | | |
|-------|---|----------|-----|-----|---|-----|-------------|----|------------|--------|------|-----|---|
| 34764 | Δ | PHY 009B | COM | D02 | Classical Physics | 4.0 | The Staff | TR | 0610-0730P | RESSLR | 66 | 22 | 3 |
| | | | | | | | | W | 0510-0600P | PHYGEO | 130 | | |
| 34765 | Δ | PHY 009B | COM | D03 | Classical Physics | 4.0 | The Staff | TR | 0610-0730P | RESSLR | 66 | 22 | 3 |
| | | | | | | | | W | 0610-0700P | PHYGEO | 130 | | |
| 34766 | Δ | PHY 009B | COM | D04 | Classical Physics | 4.0 | The Staff | TR | 0610-0730P | RESSLR | 66 | 22 | 3 |
| | | | | | | | | W | 0710-0800P | PHYGEO | 130 | | |
| 34767 | Δ | PHY 009B | COM | D05 | Classical Physics | 4.0 | The Staff | TR | 0610-0730P | RESSLR | 66 | 22 | 3 |
| | | | | | | | | T | 0510-0600P | RESSLR | 152 | | |
| 34768 | Δ | PHY 009B | COM | D06 | Classical Physics | 4.0 | The Staff | TR | 0610-0730P | RESSLR | 66 | 22 | 3 |
| | | | | | | | | T | 0840-0930P | PHYGEO | 140 | | |
| 34769 | Δ | PHY 009B | COM | D07 | Classical Physics | 4.0 | The Staff | TR | 0610-0730P | RESSLR | 66 | 22 | 3 |
| | | | | | | | | W | 0810-0900P | PHYGEO | 140 | | |
| 41178 | Δ | PHY 009B | COM | D08 | Classical Physics | 4.0 | The Staff | TR | 0610-0730P | RESSLR | 66 | 22 | 3 |
| | | | | | | | | W | 0310-0400P | PHYGEO | 140 | | |
| 37039 | | PSC 168 | LEC | 001 | Abnormal Psych ** PASS 1: OPEN TO MAJORS ** | 4.0 | The Staff | MW | 0610-0800P | YOUNG | 198 | 250 | 4 |
| 37658 | Δ | SOC 001 | COM | A01 | Intro Sociology | 5.0 | The Staff | MW | 0610-0800P | WELLMN | 126 | 25 | 4 |
| | | | | | | | | M | 0410-0500P | GYM | 290 | | |
| 37659 | Δ | SOC 001 | COM | A02 | Intro Sociology | 5.0 | The Staff | MW | 0610-0800P | WELLMN | 126 | 25 | 4 |
| | | | | | | | | M | 0510-0600P | GYM | 290 | | |
| 37660 | Δ | SOC 001 | COM | A03 | Intro Sociology | 5.0 | The Staff | MW | 0610-0800P | WELLMN | 126 | 25 | 4 |
| | | | | | | | | R | 0410-0500P | HUTCH | 102 | | |
| 37661 | Δ | SOC 001 | COM | A04 | Intro Sociology | 5.0 | The Staff | MW | 0610-0800P | WELLMN | 126 | 25 | 4 |
| | | | | | | | | R | 0510-0600P | HUTCH | 102 | | |
| 37662 | Δ | SOC 001 | COM | C01 | Intro Sociology | 5.0 | The Staff | TR | 0610-0800P | WELLMN | 126 | 25 | 3 |
| | | | | | | | | F | 0900-0950A | BAINER | 1060 | | |
| 37663 | Δ | SOC 001 | COM | C02 | Intro Sociology | 5.0 | The Staff | TR | 0610-0800P | WELLMN | 126 | 25 | 3 |
| | | | | | | | | F | 1000-1050A | BAINER | 1060 | | |
| 37664 | Δ | SOC 001 | COM | C03 | Intro Sociology | 5.0 | The Staff | TR | 0610-0800P | WELLMN | 126 | 25 | 3 |
| | | | | | | | | F | 1100-1150A | BAINER | 1060 | | |
| 37665 | Δ | SOC 001 | COM | C04 | Intro Sociology | 5.0 | The Staff | TR | 0610-0800P | WELLMN | 126 | 25 | 3 |
| | | | | | | | | F | 1210-0100P | BAINER | 1134 | | |
| 37724 | | SOC 120 | COM | 001 | Deviance ** PASS 1: OPEN TO UPPER DIVISION MAJORS AND GRADUATE STUDENTS ** | 4.0 | Skonovd, LN | MW | 0610-0730P | OLSON | 118 | 50 | 4 |
| 37725 | | SOC 125 | LEC | 001 | Sociology of Culture ** PASS 1: OPEN TO UPPER DIVISION MAJORS AND GRADUATE STUDENTS ** | 4.0 | Bright, SE | TR | 0610-0730P | OLSON | 118 | 50 | 3 |

Updates and changes to courses

African American and African Studies (AAS)

168. Black Documentary: Theory and Practice (4)

Lecture—3 hours; laboratory—3 hours. Prerequisite: Humanities 10, course 170 and consent of instructor; course 50 recommended. Preference given to African American and African Studies majors and minors. A study of Black documentary history and understanding of the use of the documentary form for political purposes. A discussion of documentary theory. Each student, singly or in a team, will create and carefully edit a documentary project. Offered in alternate years. GE credit: ArtHum, Div.—III. Acham (new course—eff. winter 2002)

Anatomy, Physiology, and Cell Biology (APC)

286. Basics of Microscopy and Cellular Imaging (2)

Lecture—10 sessions; laboratory—10 sessions. Prerequisite: graduate standing. Practical applications of basic microscope techniques used to image cells and tissues with the goal of using these techniques to generate publication quality images. Principles of light, epifluorescent, confocal and electron microscopy, their applications and limitations. Offered in alternate years.—III. Van Winkle (new course—eff. spring 2002)

Animal Behavior (ANB)

287. Advanced Animal Behavior (2)

Seminar—2 hours. Prerequisite: graduate standing and consent of instructor, courses in animal behavior (Neurobiology, Physiology, and Behavior 102 or the equivalent), and either evolution (Evolution and Ecology 100 or the equivalent) or ecology (Evolution and Ecology 101 or the equivalent). Reading, reports and discussion on current topics in animal behavior, with a focus on topics that lie at the interface between animal behavior, ecology and evolution. (Same course as Population Biology 287.) May be repeated twice for credit.—III. Stamps (new course—eff. spring 2002)

Atmospheric Science (ATM)

149. Air Pollution (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: Mathematics 21D, 22B, Chemistry 2B, Atmospheric Science 121A or Engineering 103. Physical and technical aspects of air pollution. Emphasis on geophysical processes and air pollution meteorology as well as physical and chemical properties of pollutants. (Same course as Civil and Environmental Engineering 149.)—I. Carroll, Chang (change in existing course—eff. fall 2001)

Biological Sciences: Evolution and Ecology (EVE)

117. Plant Ecology (4)

Lecture—3 hours; fieldwork—3 hours. Prerequisite: Biological Sciences 1A, 1B, 1C; Plant Biology 111 recommended. The study of the interactions between plants, plant populations or vegetation types and their physical and biological environment. Special emphasis on California. Four full-day field trips and brief write-up of class project required. (Same course as Plant Biology 117.)—I. Percy (change in existing course—eff. fall 2001)

121. Survey of Plant Communities of California (4)

Lecture—2 hours; fieldwork—3 hours; term paper. Prerequisite: Biological Sciences 1A or 1B or 1C or Molecular and Cellular Biology 10 recommended. Consent of instructor required quarter preceding the course. Upper division standing may be required if enrollment must be limited. Structure of selected plant communities and the relationship of their component species to the environment. Especially for non-majors. Four weekend fieldtrips required. GE credit: SciEng, Wrt.—III. Barbour (change in existing course—eff. spring 2002)

134F. Field Herpetology (2)

Fieldwork—5 hours; lecture/discussion—1 hour. Prerequisite: Biological Sciences 1A, 1B, concurrent enrollment in course 134 and 134L. Multi-day field trips to major California habitats focus on identification of, and ecological experiments on, amphibian and reptile species. Students work in teams to plan experiments, collect and analyze data, write up results and give oral presentations to the class. Offered in alternate years.—III. Shaffer (new course—eff. spring 2002)

134L. Herpetology Laboratory (2)

Laboratory—6 hours. Prerequisite: Biological Sciences 1A, 1B, course 134 concurrently. The diagnostic characteristics and functional attributes of amphibians and reptiles, emphasizing ecological, biogeographic and phylogenetic patterns. Field experience with common species of reptiles and amphibians in the Davis area. Offered in alternate years.—III. Shaffer (change in existing course—eff. spring 2002)

287. Seminar in Animal Behavior (2)

(cancelled course—eff. spring 2002)

Biological Sciences: Exercise Biology (EXB)

201. Exercise Cardiorespiratory Physiology (3)

Lecture/discussion—3 hours. Prerequisite: undergraduate course in systemic physiology, exercise physiology, and biochemistry (intermediary metabolism). Advanced course on integrated responses of the cardiovascular and respiratory systems to exercise. Includes hemodynamic, neurohormonal, and autonomic aspects of cardiac and vascular function, principles of myocardial metabolism, and mechanisms underlying changes in pulmonary function and gas transport.—I. Stebbins (new course—eff. fall 2001)

Biological Sciences: Microbiology (MIC)

275. Seminar in DNA Repair and Recombination (1)

Seminar—1 hour. Prerequisite: consent of instructor; graduate standing in Microbiology or closely related field. Review and discussion of current research and literature in DNA repair and recombination with presentations by individual students and invited speakers. May be repeated for credit. (S/U grading only.)—I, II, III. Heyer (new course—eff. fall 2001)

Biological Sciences: Plant Biology (PLB)**117. Plant Ecology (4)**

Lecture—3 hours; fieldwork—3 hours. Prerequisite: Biological Sciences 1A, 1B, 1C; course 111 recommended. The study of the interactions between plants, plant populations or vegetation types and their physical and biological environment. Special emphasis on California. Four full-day field trips and brief write-up of class project required. (Same course as Evolution and Ecology 117.)—I.

Pearcy

(change in existing course—eff. fall 2001)

148. Introductory Mycology (4)

Lecture—2 hours; laboratory—6 hours. Prerequisite: Biological Sciences 1A, 1B, 1C. Systematics, ecology, evolution, and morphology of fungi. Importance of fungi to humans. (Same course as Plant Pathology 148.)—I. MacDonald, Rizzo

(change in existing course—eff. fall 2001)

Chemistry (CHE)**105. Analytical and Physical Chemical Methods (4)**

Lecture—2 hours; laboratory—6 hours. Prerequisite: course 110A (may be taken concurrently) or consent of instructor. Fundamental theory and laboratory techniques in analytical and physical chemistry. Errors and data analysis methods. Basic electrical circuits in instruments. Advanced solution equilibria. Potentiometric analysis. Chromatographic separations. UV-visible spectroscopy. Lasers.—I, III.

(change in existing course—eff. fall 2001)

107A. Physical Chemistry for the Life Sciences (3)

Lecture—3 hours. Prerequisite: course 2C, Mathematics 16C or 21C, one year of college level physics. Physical chemistry intended for majors in the life science area. Introductory development of classical and statistical thermodynamics including equilibrium processes and solutions of both non-electrolytes and electrolytes. The thermodynamic basis of electrochemistry and membrane potentials.—I.

(change in existing course—eff. fall 2001)

107B. Physical Chemistry for the Life Sciences (3)

Lecture—3 hours. Prerequisite: course 107A. Continuation of course 107A. Kinetic theory of gases and transport processes in liquids. Chemical kinetics, enzyme kinetics and theories of reaction rates. Introduction to quantum theory, atomic and molecular structure, and spectroscopy. Application to problems in the biological sciences.—II.

(change in existing course—eff. winter 2002)

219. Spectroscopy of Organic Compounds (4)

Lecture—3 hours; laboratory—2.5 hours. Prerequisite: course 128C or the equivalent. Identification of organic compounds and investigation of stereochemical and reaction mechanism phenomena using spectroscopic methods—principally NMR, IR and MS.—I.

(change in existing course—eff. fall 2001)

228D. Homogeneous Catalysis (3)

Lecture—3 hours. Prerequisite: course 226. Overview of homogeneous catalysis and related methods, with emphasis on kinetics, mechanisms, and applications for organic synthesis. The related methods may include cluster, colloid, phase transfer, enzymatic, heterogeneous and polymer-supported catalysis. Offered in alternate years.—III.

(new course—eff. fall 2001)

Community and Regional Development (CRD)**241. The Economics of Community Development (4)**

Seminar—4 hours. Prerequisite: graduate standing. Economic theories and methods of planning for communities. Human resources, community services and infrastructure, industrialization and technological change, and regional growth. The community's role in the greater economy.—I. Kenney

(change in existing course—eff. fall 2001)

Comparative Literature (COM)**12. Introduction to Women Writers (4)**

Lecture—3 hours; discussion—1 hour. Prerequisite: completion of subject A requirement. Survey of fiction, drama, and poetry by women writers from all continents. Concerns of women compared in light of their varied social and cultural traditions. Literary analysis of voice, imagery, narrative strategies and diction. GE credit:

ArtHum, Div, Wrt.—III. Lokke

(change in existing course—eff. spring 2002)

Design (DES)**144. History of Interior Design (4)**

Lecture—4 hours. Prerequisite: course 40A or 40B; Art History 1C recommended. Priority to Design majors. History of interior design in Europe and America from the classical period to modern times.

Emphasis on the dwelling in its cultural setting and the development of the theory of modern interior design. One all-day field trip required. GE credit: ArtHum, Wrt.—III.

(change in existing course—eff. spring 2002)

150A. Computer-Assisted Drawing for Designers (4)

Lecture—2 hours; studio—4 hours. Prerequisite: course 21 or consent of instructor. Priority to Design majors. Computer assisted drawing and modeling using a mid-level, multi-use CAD program. Basic architectural drawing and modeling technique in both two-dimensional and three-dimensional CAD environments. Not open for credit to students who have completed course 150.—I, II.

(new course—eff. summer 2001)

150B. Computer-Assisted Presentations for Interior Architecture (4)

Lecture—2 hours; studio—4 hours. Prerequisite: course 16 and 150A or consent of instructor. Priority to Design majors.

Computer-assisted architectural presentation including the development of complex 3D models, techniques of photo-realistic rendering and computer simulation of movement through architectural and interior space.—III.

(new course—eff. summer 2001)

Economics (ECN)**102. Analysis of Economic Data (4)**

Lecture—3 hours; discussion—1 hour. Prerequisite: course 1A and 1B, Statistics 13 or 32, Mathematics 16A and 16B, or consent of instructor. Analysis of economic data to investigate the key relationships emphasized in introductory microeconomics and macroeconomics. A standard spreadsheet program rather than specialized statistical software is used. Only 2 units of credit allowed to students who have completed course 140 or Agricultural and Resource Economics 106.—I. Cameron

(change in existing course—eff. fall 2001)

140. Econometrics (4)

Lecture—2 hours; discussion—2 hours. Prerequisite: course 100 or 104 and course 101 or 105, Mathematics 16A and 16B or 21A and 21B, Statistics 13, course 102 or any upper division statistics course. Introduction of problems of observation, estimation and hypotheses testing in economics through the study of the theory and application of linear regression models, critical evaluation of selected examples of empirical research and exercises in applied economics. Not open for credit to students who have completed Agricultural and Resource Economics 106.—II. Jorda
(change in existing course—eff. winter 2002)

145. Transportation Economics (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 100, Mathematics 16A, 16B, Statistics 13 or consent of instructor. Intended for advanced economics undergraduates. Examination of fundamental problems of planning and financing transportation “infrastructure” (roads, ports, airports). The economics of the automobile industry, as well as the impact of government regulation and deregulation in the airlines and trucking industries.—II. Feenstra, Branstetter
(new course—eff. winter 2002)

221A. The Theory of Industrial Organization (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 200A, 200B, 200C. Game theory is used to analyze strategic interaction of firms in industries. Topics include models of competition, product differentiation, entry-detering strategies, contractual arrangements, vertical control and antitrust issues.—I. Bonanno
(change in existing course—eff. fall 2001)

221B. Empirical Analysis in Industrial Organization (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 221A and 240B. Recent empirical work in industrial organization. Topics include empirical analysis of cartels, product differentiation, innovation and technological change, and imperfect competition in international markets.—II. Branstetter
(change in existing course—eff. winter 2002)

221C. Industrial Organization and Regulation (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 221A and 240B. Optimal regulation of natural monopoly. Topics include regulatory mechanisms for single and multiple output firms under symmetric and asymmetric information, optimality without regulation, the economic theory of regulation, and empirical studies of regulation and deregulation.—III. Prieger
(change in existing course—eff. spring 2002)

230A. Public Economics (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 200C. Measures of deadweight loss and consumer surplus; optimal commodity and income taxation; tax incidence; policy issues in personal taxation, corporate taxation, and social insurance; the evaluation of effective tax rates.—I. Helms
(change in existing course—eff. fall 2001)

230B. Public Economics (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 230A, 240A, 240B. Effects of government policies on economic behavior; labor supply, program participation, investment, consumption and savings.—II. Page
(change in existing course—eff. fall 2001)

230C. Public Economics (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 200C and 240B. Advanced topics in economics of the public sector, with emphasis on current research. Topics may vary from year to year.—III.
(change in existing course—eff. fall 2001)

Education (EDU)**92. Internship (1-3)**

Internship—3-9 hours. Prerequisite: consent of instructor. Enrollment dependent on availability of intern placements. Internship as a teacher's aide or tutor in K-12 classrooms under the supervision of a faculty member. May be repeated for credit. (P/NP grading only.)
(new course—eff. fall 2001)

192. Internship (1-3)

Internship—2-8 hours; discussion—1 hour. Prerequisite: upper division standing and consent of instructor. Internship as a tutor, teacher's aide, or peer counselor in a school or educational counseling setting under the supervision of a faculty member. May be repeated for credit. (P/NP grading only.)
(change in existing course—eff. fall 2001)

Engineering (ENG)**35. Statics (3)**

Lecture—2 hours; laboratory—3 hours. Prerequisite: Physics 9A, Mathematics 21D (may be taken concurrently); Engineering 6 recommended. Force systems and equilibrium conditions with emphasis on engineering problems.—I, II, III.
(change in existing course—eff. fall 2001)

Engineering: Applied Science Davis (EAD)**205B. Mathematical Methods (3)**

Lecture—3 hours. Prerequisite: course 205A. Laplace transforms, Sturm-Liouville theory, solution of 2nd order linear ODE, approximate solutions of ODE, calculus of variations, characteristics.—II. Jensen, Orel, Rodrique
(new course—eff. winter 2002)

205C. Mathematical Methods (3)

Lecture—3 hours. Prerequisite: course 205B. Spherical harmonics, Bessel functions, conformal mapping, hypergeometric functions, elliptic functions.—III. Jensen, Orel, Rodrique
(new course—eff. spring 2002)

Engineering: Biomedical (BIM)**1. Introduction to Biomedical Engineering (1)**

Lecture—1 hour. Introduction to the field of biomedical engineering with examples taken from the various areas of specialization within the discipline. Areas include cellular and molecular engineering; biomedical imaging; biofluids and transport; musculoskeletal biomechanics; and bioinstrumentation. (P/NP grading only.)—I. Hull
(new course—eff. fall 2002)

106. Biotransport Phenomena (4)

Lecture—4 hours. Prerequisite: Neurobiology, Physiology, and Behavior 101, Physics 9B, course 107 (may be taken concurrently). Principles of heat and mass transfer with applications to biomedical systems; emphasis on heat exchange between the biomedical system and its environment, mass transfer across cell membranes and the design and analysis of artificial human organs.—III. (new course—eff. spring 2002)

Engineering: Civil and Environmental (ECI)**149. Air Pollution (4)**

Lecture—3 hours; discussion—1 hour. Prerequisite: Mathematics 21D, 22B, Chemistry 2B, Atmospheric Science 121A or Engineering 103. Physical and technical aspects of air pollution. Emphasis on geophysical processes and air pollution meteorology as well as physical and chemical properties of pollutants. (Same course as Atmospheric Science 149.)—I. Chang (change in existing course—eff. fall 2001)

232. Advanced Topics in Concrete Structures (4)

Lecture—4 hours. Prerequisite: course 130, 135, 138 and graduate standing. Ductility of reinforced concrete; strength of two-way slabs; modified compression field theory.—I. Chai (change in existing course—eff. fall 2001)

268. Infrastructure Economics (3)

Lecture—3 hours. Prerequisite: Economics 1A, Engineering 106 or the equivalent. Economics applied to infrastructure engineering planning, operations, maintenance, and management problems; microeconomic and macroeconomic theories; benefit-cost analysis; effect of uncertainty; optimization economics; non-classical economics; public finance. Offered in alternate years.—II. Lund (change in existing course—eff. winter 2002)

Engineering: Computer Science (ECS)**20. Discrete Mathematics for Computer Science (4)**

Lecture—3 hours; discussion—1 hour. Prerequisite: Mathematics 21A. Discrete structures and applications in computer science. Proofs, particularly induction. Introduction to propositional logic, logic circuit design, combinatorics, recursion and solution of recurrence relations, analysis of algorithms, graph theory and trees, finite state machines. Not open for credit to students who have completed course 100.—I, II, III (change in existing course—eff. fall 2001)

110. Data Structures and Programming (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 20 and 40 with a grade of C- or better. Design and analysis of data structures for a variety of applications. Trees, heaps, searching, sorting, hashing, graphs. Extensive programming.—I, II, III. Rogaway (change in existing course—eff. fall 2001)

289M. Special Topics in Computer Science (1-5)

(M) Security (new course—eff. winter 2001)

Engineering: Electrical and Computer (EEC)**230. Electromagnetics (3)**

Lecture—3 hours. Prerequisite: course 130B. Maxwell's equations, plane waves, reflection and refraction, complex waves, waveguides, resonant cavities, and basic antennas.—I. (change in existing course—eff. fall 2001)

243. Silicon-on-Insulator (SOI) Technology (3)

Lecture—3 hours. Prerequisite: course 140B or 240 recommended. SOI (Silicon-on-Insulator) technology from all major points of view: materials fabrication, processing technology, device physics, and circuit basics. Offered in alternate years.—III. Colinge (change in existing course—eff. spring 2001)

269A. Error Correcting Codes I (3)

Lecture—3 hours. Prerequisite: Mathematics 22A and course 160. Introduction to the theory and practice of block codes, linear block codes, cyclic codes, decoding algorithms, coding techniques.—I. Abdel-Ghaffer, Lin (new course—eff. fall 2001)

269B. Error Correcting Codes II (3)

Lecture—3 hours. Prerequisite: course 165 and 269A. Introduction to convolutional codes, turbo codes, trellis and block coded modulation codes, soft-decision decoding algorithms, the Viterbi algorithm, reliability-based decoding, trellis-based decoding, multistage decoding. Offered in alternate years.—III. Abdel-Ghaffer, Lin (new course—eff. spring 2002)

269. Error Correcting Codes (3)

(cancelled course—eff. fall 2001)

Engineering: Mechanical (EME)**1. Mechanical Engineering (1)**

Lecture—1 hour. Description of the field of mechanical engineering with examples taken from industrial applications, discussions of the practice with respect to engineering principles, ethics, and responsibilities. (P/NP grading only.)—I. (change in existing course—eff. fall 2001)

150A. Mechanical Design (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: Engineering 45 and 104, course 50 (may be taken concurrently). Restricted to Aeronautical, Materials Science, Mechanical Engineering and Biological Systems majors only. The principles of engineering mechanics applied to mechanical design. Theories of static and fatigue failure of metals. Design projects emphasizing the progression from conceptualization to hardware. Experimental stress analysis and mechanical measurements using strain gages.—I, III. Ravani (change in existing course—eff. fall 2001)

Food Science and Technology (FST)**3. Introduction to Brewing and Beer (3)**

Lecture—3 hours. Basic description of brewing and associated processes, from raw materials to final product; history of brewing and brewing science; types of beer worldwide; world beer markets; basics of beer quality, including wholesomeness; role of scientist in brewing. GE credit: SciEng.—I. Bamforth (new course—eff. fall 2001)

107. Food Sensory Science (4)

Lecture—3 hours; laboratory—3 hours. Prerequisite: Agricultural Systems and Environment 120 or course 117 (may be taken concurrently). Critical examination of techniques and theories of sensory measurement of food; measures of consumer perception and acceptance. An introduction to the sensory and cognitive systems associated with the perception of food. Not open for credit to students who have completed course 107A.—I. O'Mahoney (new course—eff. fall 2001)

127. Sensory Evaluation of Foods (4)

Lecture—3 hours; laboratory—3 hours. Prerequisite: Agricultural Systems and Environment 120 or course 117. A critical examination of methods of sensory measurement applied to food and beverage systems; descriptive analysis and consumer tests and their application to quality assurance, product development and optimization.—II. Guinard
(change in existing course—eff. spring 2002)

Genetics (GGG)**220. Genomics and Biotechnology of Plant Improvement (3)**

Lecture—3 hours. Prerequisite: Biological Sciences 101 or the equivalent. Integration of modern biotechnology and classical plant breeding including the impact of structural, comparative and functional genomics on gene discovery, characterization and exploitation. Also covers molecular markers, plant transformation, hybrid production, disease resistance, and novel output traits. (Same course as Vegetable Crops 220.)—II. Michelmore
(new course—eff. winter 2002)

300. Methods in Teaching Genetics (1-3)

Lecture/discussion. Prerequisite: graduate standing and consent of instructor. Practical experience in the methods and problems of teaching genetics. Includes analysis of texts and supporting material, discussion of teaching techniques, preparing for and conducting discussion or laboratory sections, formulating examinations under supervision of instructor. May be repeated for credit up to 3 times or 9 units if teaching in different genetics related course. (S/U grading only.)—I, II, III.
(new course—eff. fall 2001)

Geology (GEL)**156. Hydrogeology and Contaminant Transport (5)**

Lecture—3 hours; laboratory—3 hours; term paper. Prerequisite: Hydrologic Science 145, Civil and Environmental Engineering 144 or the equivalent. Physical and chemical processes affecting groundwater flow and contaminant transport, with emphasis on realistic hydrogeologic systems. Groundwater geology and chemistry. Fundamentals of groundwater flow and transport analysis. Laboratory includes field pumping test and work with physical and computer models. (Same course as Hydrologic Science 146.)—II. Fogg
(new course—eff. winter 2002)

281N. Instrumental Techniques for Earth Scientists (3)

Lecture—2 hours; laboratory—3 hours. Prerequisite: Mathematics 21A, 21B, 21C, Physics 7A, 7B, 7C or 9A, 9B, 9C or consent of instructor. Laboratory research techniques for new graduate students in Geology. Demonstration of and exposure to appropriate techniques in research.—I. Schiffman
(new course—eff. fall 2001)

282. Geological X-Ray Spectrometric Analysis (4)

(cancelled course—eff. fall 2001)

German (GER)**92. Field Work in German (1-12)**

Internship—3-36 hours. Prerequisite: lower division standing. Total immersion program in Germany or a German speaking setting in the U.S. to further develop students' proficiency in the German language. (P/NP grading only.)
(new course—eff. fall 2001)

113. Goethe's Faust (4)

Discussion—3 hours; term paper. Knowledge of German not required. Intensive study of Goethe's *Faust* in its entirety. Discussions and readings in English; reading the text in the original is encouraged. Offered in alternate years. GE credit: ArtHum, Wrt.—II. Schaeffer
(change in existing course—eff. fall 2001)

118A. Vienna at the Turn of the Twentieth Century (The End of the Habsburg Empire) (4)

Lecture—1 hour; discussion—2 hours; extensive writing. Knowledge of German not required. Cultural ferment in Vienna, capital of the multinational Habsburg empire, at the turn of the century, with consideration of innovations in literature, music, graphic arts, architecture, philosophy and psychology, heralding European modernism. Offered in alternate years. GE credit: ArtHum, Wrt.—I. Menges
(change in existing course—eff. fall 2001)

121. The Medieval Period in German Literature (4)

Discussion—3 hours; extensive writing. Prerequisite: course 21. Literary-philosophical profile of the Mittelhochdeutsche Blütezeit in terms of the significant epics, romances, and lyric poetry. Readings in German. Offered in alternate years. GE credit: ArtHum.—II. McConnell
(change in existing course—eff. fall 2001)

123. Literature of the Classical Age (4)

Discussion—3 hours; term paper. Prerequisite: course 21. A critical assessment of principal works of Goethe and Schiller in their development from Sturm and Drang individualism and rebellion to the balanced harmony of the classical period. Offered in alternate years. GE credit: ArtHum.—I. Bernd
(change in existing course—eff. fall 2001)

132. The German Novelle (4)

Lecture—3 hours; term paper. Prerequisite: course 21. Inquiry into the art of the "Novelle" through analysis of the materials and formal devices of representative authors from Goethe to Kafka. Offered in alternate years. GE credit: ArtHum.—I. Bernd
(change in existing course—eff. fall 2001)

133. The German Drama (4)

Lecture—3 hours; term paper. Prerequisite: course 21. Readings in the works of Germany's leading dramatists from the eighteenth century to the present day, such as Lessing, Goethe, Schiller, Kleist, Büchner, Hauptmann, Brecht. Offered in alternate years. GE credit: ArtHum.—III. Bernd
(change in existing course—eff. fall 2001)

142. New German Cinema (4)

Lecture—3 hours; discussion—1 hour. Knowledge of German not required. A survey of representative works of the most influential filmmakers of the New-German cinema: Alexander Kluge, Volker Schlöndorff, Rainer Werner Fassbinder, Werner Herzog, Hans-Jürgen Syberberg, Wim Wenders, Margarethe von Trotta, Helke Sander, Helma Sanders-Brahms and Jutta Brückner.—I. Menges
(change in existing course—eff. fall 2001)

144. Marx, Nietzsche, Freud (4)

(cancelled course—eff. fall 2001)

160. Love in the Middle Ages (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 21. Analysis of the phenomenon of love in selected medieval lyrical poems and romances of the twelfth and thirteenth century Blütezeit. Origins of courtly love, love and individualism, love and the Church, love and adultery. Not offered every year.—I. McConnell
(change in existing course—eff. fall 2001)

166. Die Meistersinger (4)

Lecture/discussion—3 hours; listening—1 hour. Prerequisite: course 21. Wagner's music drama Die Meistersinger von Nürnberg against the background of the city's cultural history, the practice of Meistersang and the historical Hans Sachs. The relationship of words to music, and the resulting music-drama as an eminently humanistic work. Offered in alternate years.—III. Schaeffer
(change in existing course—eff. fall 2001)

167. Ribaldry in German Literature (4)

Laboratory/discussion—3 hours; extensive writing. Prerequisite: course 21 or consent of instructor. Survey of German Literature from late Middle Ages to Age of Goethe, focusing on ribaldry, i.e., earthy humor close to everyday life, sometimes for its own sake, more often as social satire or the promotion of causes such as the Reformation. Offered in alternate years.—III. Schaeffer
(change in existing course—eff. fall 2001)

185. The Age of Bismarck (4)

Discussion—3 hours; term paper. Prerequisite: course 21. Notable literary repercussions that took place when Germany's international status reached its peak during the age of the Iron Chancellor. The poetry of Storm, the prose of Fontane, the drama of Hauptmann. Offered in alternate years. GE credit: ArtHum.—II. Bernd
(change in existing course—eff. fall 2001)

192. Field Work in German (1-12)

Internship—3-36 hours. Prerequisite: course 109A or consent of instructor. Total immersion program in Germany or a German speaking setting in the U.S. to further develop students proficiency in the German language. (P/NP grading only.)
(change in existing course—eff. fall 2001)

History (HIS)**10B. World History, c. 1350-1850 (4)**

Lecture—3 hours; discussion—1 hour. Major topics in world history from the 14th century to the beginning of the 19th century. Topics will vary but may include oceans as systems of human communication and conflict; the global consequences of "industrious revolutions" in Europe and Asia, etc. Offered in alternate years. GE credit: ArtHum, Wrt.—II.
(new course—eff. winter 2001)

104B. Honors Thesis (4)

Tutorial—4 hours. Prerequisite: course 104A. Research in preparation of a senior honors thesis under the direction of a faculty adviser. (Deferred grading only, pending completion of sequence.)—II.
(change in existing course—eff. winter 2002)

104C. Honors Thesis (4)

Tutorial—4 hours. Prerequisite: course 104A and 104B. Completion of a senior honors thesis under the direction of a faculty adviser.—III.
(change in existing course—eff. spring 2002)

Human Development (HDE)**292. Graduate Internship (1-12)**

Internship—3-36 hours. Prerequisite: consent of instructor and satisfactory completion of placement relevant courses (for example, Education 213, 216, course 222, 241, 242, Law 272, 273). Individually designed supervised internship, off campus, in community or institutional setting. Developed with advice of faculty mentor. (S/U grading only.)—I, II, III.
(new course—eff. fall 2001)

Humanities (HUM)**1. Humanities Forum (2)**

Lecture—2 hours. Reading and discussion of a single work representative of a particular culture, historical period, or genre and significant for its ongoing cultural impact in the humanities, sciences, social sciences, technology, and popular arenas. Attention to provocative implications for contemporary society. May be repeated once for credit if topic differs.
(change in existing course—eff. fall 2001)

1D. Issues and Concepts in the Humanities (2)

Discussion—2 hours. Prerequisite: course 1 required concurrently. Small group discussions and preparation of short papers for course 1. May be repeated once for credit if topic differs. GE credit with concurrent enrollment in course 1: Wrt.
(change in existing course—eff. fall 2001)

144. Marx, Nietzsche, Freud (4)

Lecture/discussion—3 hours; term paper. Study of major texts of these thinkers, selected with an eye to their impact on 20th-century economics, ethics, and attitudes toward eros. Particular focus on conceptions of the self and the individual's relation to society. Offered in alternate years. GE credit: ArtHum, Wrt.—I. Finney
(new course—eff. fall 2001)

Hydrologic Science (HYD)**146. Hydrogeology and Contaminant Transport (5)**

Lecture—3 hours; laboratory—2 hours; term paper. Prerequisite: course 144 or Civil and Environmental Engineering 144 or the equivalent. Physical and chemical processes affecting groundwater flow and contaminant transport, with emphasis on realistic hydrogeologic examples. Groundwater geology and chemistry. Fundamentals of groundwater flow and transport analysis. Laboratory includes field pumping test and work with physical and computer models. (Same course as Geology 156.)—II. Fogg
(change in existing course—eff. winter 2002)

Japanese (JPN)**109. Japanese Popular Culture (5)**

Lecture—3 hours; discussion—1 hour; film viewing—3 hours. Japanese popular culture, from its medieval/early modern precedents to contemporary incarnations. Emphasis on the major forms of twentieth-century popular culture, including genre films, popular theater, TV manga (cartoons), animation and science fiction. GE credit: ArtHum, Div.—III. Kim
(new course—eff. fall 2001)

Jewish Studies (JST)**10. Introduction to Jewish Cultures (4)**

Lecture—3 hours; term paper. Diverse Jewish cultures created over the past 2,000 years using examples from less-familiar communities such as India, China, and Ethiopia. Topics include the tensions between homeland/diaspora and questions of identity (race, nationality, culture, or religion). GE credit: SocSci, Div, Wrt. (new course—eff. winter 2002)

Management (MGT)**120. Managing and Using Information Technology (4)**

Lecture—4 hours. Prerequisite: courses in economics, accounting, mathematics and statistics for the technology management minor. Introduction to computer hardware, systems software and information systems. Emphasizes the management of information technology and the impact of information systems on modern management.

(new course—eff. fall 2001)

140. Marketing for the Technology Based Enterprise (4)

Lecture/discussion—4 hours. Prerequisite: courses in economics, accounting, mathematics, and statistics for the technology management minor. Addresses the marketing process in technology-based companies. Emphasizes understanding how cross-functional teams including scientists, engineers, and business people jointly develop, launch, and support products and service for consumers and other businesses.

(new course—eff. fall 2001)

150. Technology Management (4)

Lecture/discussion—4 hours. Prerequisite: courses in economics, accounting, mathematics, and statistics for the technology management minor. Introduction to the management of firms in high technology industries such as software development and biotechnology research. Uses cases, readings and exercises to understand the issues involved in motivating and managing knowledge workers, organizing for innovation, and decision making in a fast-paced business environment.

(new course—eff. fall 2001)

160. Financing New Business Ventures (4)

Lecture—4 hours. Prerequisite: courses in economics, accounting, mathematics, and statistics for the technology management minor. Concepts and methods used to evaluate, structure and finance new business ventures. Topics include the evaluation of new investment projects, raising venture capital, the role of the venture capitalist and the choice of organizational structure in new ventures.

(new course—eff. fall 2001)

170. Managing Costs and Quality (4)

Lecture—4 hours. Prerequisite: courses in economics, accounting, mathematics, and statistics for the technology management minor. Deals with designing cost systems in high technology organizations, and managing operations to maximize quality and minimize costs. Topics include activity based costing and management, managing quality and time to create value, ethical issues in cost assignment, and differential costing for decision making.

(new course—eff. fall 2001)

180. Supply Chain Planning and Management (4)

Lecture—4 hours. Prerequisite: courses in economics, accounting, mathematics, and statistics for the technology management minor. Quantitative techniques for analysis and management of modern supply chains for the production and delivery of goods and services.

(new course—eff. fall 2001)

Mathematics (MAT)**17A. Calculus for Biology and Medicine (4)**

Lecture—3 hours; discussion—1 hour. Prerequisite: two years of high school algebra, plane geometry, plane trigonometry, and analytical geometry, and satisfaction of the Mathematics Placement Requirement. Introduction to differential calculus via applications in biology and medicine. Limits, derivatives of polynomials, trigonometric, and exponential functions, graphing, applications of the derivative to biology and medicine. Only 2 units of credit to students who have completed course 16A. Not open for credit to students who have completed course 21A.—I.

(new course—eff. fall 2001)

17B. Calculus for Biology and Medicine (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 17A or 21A. Introduction to integral calculus and elementary differential equations via applications to biology and medicine. Fundamental theorem of calculus, techniques of integration including integral tables and numerical methods, improper integrals, elementary first order differential equations, applications in biology and medicine.

Only 2 units of credit to students who have completed course 16B. Not open for credit to students who have completed course 21B.—II. (new course—eff. winter 2001)

17C. Calculus for Biology and Medicine (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 17B or 21B. Matrix algebra, functions of several variables, partial derivatives, systems of differential equations, and applications to biology and medicine. Only 2 units of credit to students who have completed course 21C.—III.

(new course—eff. spring 2001)

301A-301B-301C. Mathematics Teaching Practicum (3-3-3)

Fieldwork—5 hours; discussion—1 hour. Prerequisite: course 302A-302B-302C and 303A-303B-303C concurrently or consent of instructor. Specialist training in mathematics teaching. Teaching, training, and cross observing classes taught using large group Socratic techniques, small group guided inquiry experiences, and/or other approaches to teaching at various grade levels. Required for advanced degrees in mathematics education. May be repeated once for credit.—I-II-III.

(new course—eff. fall 2001)

302A-302B-302C. Curriculum Development in Mathematics (1-1-1)

Lecture/discussion—1 hour. Prerequisite: course 303A-303B-303C concurrently or consent of instructor. Mathematics curriculum development for all grade levels. Required for advanced degrees in mathematics education. May be repeated once for credit.—I-II-III.

(new course—eff. fall 2001)

303A-303B-303C. Mathematics Pedagogy (1-1-1)

Lecture/discussion—1 hour. Prerequisite: course 302A-302B-302C or 210L concurrently or consent of instructor. An investigation of the interplay of mathematical pedagogy and mathematical content, including a historical survey of past and present methods in view of some of the influences that shaped their development. May be repeated once for credit.—I-II-III.

(new course—eff. fall 2001)

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

Discussion—1.5 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. (P/F grading only.)—I. Stevenson
(new course—eff. fall 2001)

430. Applications of Medical Principles (1)

Discussion—2 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. (H/P/F grading only.)—I, II, III, IV. Stevenson
(new course—eff. summer 2001)

430A-430B-430C-430D. Applications of Medical Principles (1)

Discussion—2 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-I-II-III. Stevenson
(new course—eff. summer 2001)

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

Lecture—4 hours. Prerequisite: approval by Committee on Student Progress. Basic biochemistry of proteins and nucleic acids, molecular genetics, regulation of gene expression, enzymes and structural proteins. Applications to clinically relevant systems, particularly sickle cell anemia, thalassemias, immunoglobulins and monoclonal antibodies, oncogenes, cell proliferation control. (P/F grading only.)—I. Voss
(change in existing course—eff. fall 2001)

Medicine: Epidemiology and Preventive Medicine (EPP)**222. Social and Behavioral Science Approaches to Public Health Issues (3)**

Lecture/discussion—3 hours. Prerequisite: Statistics 102 and 16 or the equivalent, graduate standing. Concepts and methods of social and behavioral sciences relevant to the identification and solution of public health problems. Topics include nutrition, physical activity, smoking, socioeconomic status, gender, race/ethnicity, stress, social support, social marketing, media advocacy and behavioral theories of change.—I. Gibson
(new course—eff. fall 2001)

262. Principles of Environmental Health Science (3)

Lecture—3 hours. Principles, approaches and issues related to environmental health. Recognizing, assessing, understanding and controlling the impact of people on their environment and the impact of the environment on the public.—I. Lee
(new course—eff. fall 2001)

273. Health Services Administration (3)

Lecture—3 hours. Structure and function of public and private medical care. Topics include categories and trends in national medical spending, predictors of patient use, causes of death, managed care, HMOs, Medicare, Medicaid, costs of technology, and medical care in other countries.—II. Leigh
(new course—eff. winter 2002)

421. Principles of Epidemiology and Preventive Medicine (2.5)

Lecture—4 hours; discussion—3 hours. Prerequisite: consent of Committee on Student Progress. Preventive medicine principles and epidemiologic tools necessary for their application. Measurement of health of populations, fundamentals of study design, strengths and limitations of diagnostic tests, and critical review of medical literature. (P/F grading only.)—I. McCurdy
(change in existing course—eff. fall 2001)

Medicine: Family and Community Medicine (FAP)**343. Inpatient Clinical Experience for FNP/PA (5)**

(cancelled course—eff. summer 2001)

344. Inpatient Surgical Experience for FNP/PA Students (3)

Clinical activity—9 hours. Prerequisite: Registration in the FNP/PA program. Course 340, 240A, 240B, 240C, 354A, 354B, 354C, or consent of instructor. Student clerkships in the inpatient setting in surgery at UCDCM and/or affiliated institutions. Designed to expose the students to inpatient management of surgical patients; acquaint student with FNP/PA role in surgical setting. May be repeated twice for credit (Deferred grading only, pending completion of sequence. S/U grading only.)—I, II, III, IV. Hoody, Rios
(new course—eff. summer 2001)

347. Inpatient Medical Experience for FNP/PA Students (4)

Clinical activity—12 hours. Prerequisite: Registration in the FNP/PA program. Course 340, 240A, 240B, 240C, 354A, 354B, 354C, or consent of instructor. Student clerkships in the inpatient setting in Family Practice at UCDCM and/or affiliated institutions. Designed to expose the students to inpatient management; acquaint student with FNP/PA role in the inpatient setting. May be repeated twice for credit. (Deferred grading only, pending completion of sequence. S/U grading only.)—I, II, III, IV. Hoody, Rios
(new course—eff. summer 2001)

430. Primary Care Clerkship (12)

Clinical activity—45 hours; lecture—2 hours; workshop—2 hours. Prerequisite: approval by School of Medicine Committee on Student Progress. Eight week primary care clerkship for third year medical students. Four week primary care experience with an additional four weeks in Internal Medicine clinics. (H/P/F grading only.)—I, II, III, IV. Morgan
(change in existing course—eff. summer 2001)

433. Primary Care Plus Continuum Clerkship (6)

(cancelled course—eff. summer 2001)

Medicine: Internal Medicine (IMD)**420F. Metabolic Regulatory System (2.5)**

Lecture/discussion—5.5 hours. Prerequisite: approval by the School of Medicine Committee on Student Progress. Basic understanding of pathophysiological processes in organs and tissues primarily involved in metabolic regulation and sufficient factual base so that clinical and laboratory findings, diagnosis, and elementary management of patients with endocrinological disorders can be rationalized. (P/F grading only.)—I. Wexler, Rutledge
(change in existing course—eff. fall 2001)

430. Medicine Clerkship (12)

Clinical activity—45 hours. Prerequisite: approval by School of Medicine Committee on Student Progress. Clerkship is divided into two, four-week blocks, one each at UCDMC and at Kaiser Hospitals. Time is spent in direct patient care situations under the guidance of faculty. On-going patient write-ups, rounds, conferences are required. (H/P/F grading only.)—I, II, III, IV. Prescott (change in existing course—eff. summer 2001)

433. Internal Medicine Continuum Clerkship (6)

(cancelled course—eff. summer 2001)

Medicine: Internal Medicine: Hematology—Oncology (HON)**420. Oncology (1)**

Lecture—9 hours; discussion—9 hours. Prerequisite: approval by School of Medicine Committee on Student Progress. Cancer epidemiology, cancer genetics, and cancer pharmacology; the pathophysiologic principles of oncology as they relate to specific common cancers using both lectures and case discussions. (P/F grading only.)—IV. Wisdom, DeGregorio (new course—eff. summer 2001)

Medicine: Medical Microbiology (MMI)**480B. Pathogenic Microbiology (3.5)**

Lecture—22 hours; laboratory—20 hours. Prerequisite: approval by School of Medicine Committee on Student Progress. The biology of pathogenic microorganisms with emphasis on their role in human disease. May be repeated for credit. (Deferred grading only, pending completion of sequence. P/F grading only.)—IV. Scibienski (change in existing course—eff. summer 2001)

480C. Pathogenic Microbiology (2)

Lecture/laboratory—5 hours. Prerequisite: approval by the School of Medicine Committee on Student Progress. The biology of pathogenic microorganisms with emphasis on their role in human disease. (P/F grading only.)—I. Scibienski (new course—eff. fall 2001)

Medicine: Medical Pharmacology and Toxicology (PHA)**400A. Pharmacology (2)**

Lecture—18 hours. Prerequisite: approval by School of Medicine Committee on Student Progress. Principles in pharmacology, including pharmacokinetics, drug metabolism and the actions, uses and toxicities of the major classes of drugs. (Deferred grading only, pending completion of sequence. P/F grading only.)—IV. Fischer (change in existing course—eff. summer 2001)

400B. Pharmacology (1.5)

Lecture—22 hours. Prerequisite: approval by the School of Medicine Committee on Student Progress. Principles in pharmacology, including autonomic pharmacology, endocrine pharmacology, general anesthetics, GI drugs, substance abuse and general toxicology. (Deferred grading only, pending completion of sequence. P/F grading only.)—I. Fischer (change in existing course—eff. fall 2001)

400C. Pharmacology (2.5)

Lecture—23 hours. Prerequisite: approval by the School of Medicine Committee on Student Progress. Principles in pharmacology, including pharmacokinetics, drug metabolism and the actions, uses and toxicities of the major classes of drugs. (P/F grading only.)—II. Fischer, Albertson (new course—eff. winter 2002)

Medicine: Nephrology (NEP)**460. Nephrology and Fluid Balance (3-6)**

Clinical activity—4 hours; lecture/discussion—10 hours. Prerequisite: completion of 3rd year medical school and medicine core clerkship, consent of instructor. Active participation in all inpatient/outpatient clinical activities, attendance at specific lectures and conferences at UCD Medical Center covering the field of nephrology and fluid-electrolyte disorders. Limited enrollment. (H/P/F grading only.)—I, II, III, IV. Kaysen (change in existing course—eff. summer 2001)

Medicine: Obstetrics and Gynecology (OBG)**430. Obstetrics and Gynecology Clerkship (12)**

Clinical activity—45 hours. Prerequisite: approval by School of Medicine Committee on Student Progress. Obstetrics, gynecologic and gynecological oncology experience in the delivery room, operating room, clinics and wards at UCDMC and affiliated sites. Rounds, conferences, interactive student presentations and seminars ongoing. (H/P/F grading only.)—I, II, III, IV. Ciotti (change in existing course—eff. summer 2001)

433. Obstetrics and Gynecology Continuum Clerkship (6)

(cancelled course—eff. summer 2001)

Medicine: Ophthalmology (OPT)**442. Introduction to Ophthalmology—Clerkship (3)**

Clinical activity—40 hours. Prerequisite: fourth-year medical student or third-year medical student with consent of instructor and completed third-year clerkships in medicine and surgery. Ocular disease diagnosis and management relevant to the clinical practice of future primary care physicians and others. (H/P/F grading only.)—I, II, III, IV. (new course—eff. summer 2001)

Medicine: Orthopaedic Surgery (OSU)**421. The Musculoskeletal System (2.5)**

Lecture/discussion—6 hours. Prerequisite: consent of Committee on Student Progress. Basic and clinical science of orthopaedic surgery and rheumatology. (P/F grading only.)—I. Martin (change in existing course—eff. fall 2001)

Medicine: Otolaryngology (OTO)**450. Fourth Year Otolaryngology Elective (6)**

Clinical activity—35 hours; lecture—2 hours; film-viewing—0.25 hours; discussion—1 hour. Prerequisite: 3rd or 4th year medical student. Participation in Otolaryngology Clinic and operating room. Evaluation and management of common Otolaryngologic diseases. (P/F grading only.)—I, II, III, IV. Strong (new course—eff. fall 2001)

Medicine: Pathology (PMD)**410B. Systemic Pathology (1.5)**

Lecture—8 hours; laboratory/discussion—12 hours. Prerequisite: approval by the School of Medicine Committee on Student Progress. Concepts of general pathologic processes, i.e., cell death, inflammation and neoplasia in the context of specific organ systems and human diseases in a clinical context. (Deferred grading only, pending completion of sequence. P/F grading only.)—IV. Gandour-Edwards, Jensen
(change in existing course—eff. summer 2001)

410C. Systemic Pathology (2)

Lecture—1 hour; discussion—2 hours. Prerequisite: approval by the School of Medicine Committee on Student Progress. Anatomic and clinical pathology of organ system human disease with an emphasis on integration with clinical medicine. Topics include hematopathology, gynecologic pathology, endocrine pathology, and musculoskeletal pathology. (Deferred grading only, pending completion of sequence. P/F grading only.)—I. Gandour-Edwards, Jensen
(new course—eff. fall 2001)

410D. Systemic Pathology (2.5)

Lecture—1 hour; discussion—2 hours. Prerequisite: approval by the School of Medicine Committee on Student Progress. Anatomic and clinical pathology of organ system human disease with an emphasis on integration with clinical medicine. Course content closely parallels concurrent clinical courses with integration of lectures and discussions sections. Topics include gastrointestinal pathology, hepatopathology, nutritional pathology. (Deferred grading only, pending completion of sequence. P/F grading only.)—II. Gandour-Edwards, Jensen
(new course—eff. winter 2002)

410E. Systemic Pathology (1)

Lecture—1 hour; discussion—2 hours. Prerequisite: approval by the School of Medicine Committee on Student Progress. Anatomic and clinical pathology of organ system human disease with an emphasis on integration with clinical medicine. Course content closely parallels concurrent clinical courses with integration of lectures and discussion sections. Topics include molecular pathology, cardiac pathology, renal pathology, pulmonary pathology, neuropathology, pathology of the lower urinary tract. (P/F grading only.)—III. Gandour-Edwards, Jensen
(new course—eff. spring 2002)

Medicine: Pediatrics (PED)**430. Pediatric Clerkship (12)**

Clinical activity—45 hours. Prerequisite: approval by School of Medicine Committee on Student Progress. Eight week clinical clerkship providing students with the opportunity to learn fundamentals of caring for the pediatric patient by participating in nursery, ambulatory and inpatient services at UCDMC and affiliated clinical sites. Rounds, conferences, student presentations ongoing. (H/P/F grading only.)—I, II, III, IV. Wold
(change in existing course—eff. summer 2001)

433. Pediatric Continuum Clerkship (6)

(cancelled course—eff. summer 2001)

Medicine: Psychiatry (PSY)**401. Medicine and the Mind: An Introduction to Psychiatry (2)**

Lecture/discussion—2.5 hours. Prerequisite: consent of Committee on Educational Progress. Concepts and clinical applications of psychiatry throughout the human life cycle. Biological, psychological, social, cultural and spiritual factors influencing health and illness. (P/F grading only.)—I. Servis
(change in existing course—eff. fall 2001)

430. Psychiatry Clinical Clerkship (12)

Clinical activity—45 hours. Prerequisite: approval by School of Medicine Committee on Student Progress. Assigned to clinical settings, students build upon the skills gained in preclinical years; emphasis on diagnostic, therapeutic and interpersonal skills. Areas of focus include patient management, interviewing skills, mental status exam, differential diagnosis, basic psychopharmacology, crisis assessment, intervention and case referrals. (H/P/F grading only.)—I, II, III, IV. Cox
(change in existing course—eff. summer 2001)

433. Psychiatry Continuum Clerkship (6)

(cancelled course—eff. summer 2001)

Medicine: Surgery (SUR)**430. Surgery Clerkship (12)**

Clinical activity—45 hours. Prerequisite: approval by School of Medicine Committee on Student Progress. Eight week general surgery clerkship includes GI, Burn, Oncology, Plastics, Vascular Cardiothoracic, consult, transplant and trauma. Clerkship assignments are at UCDMC. Daily core material presentations and reading assignments. Student involvement includes work-up and care of surgical patients. (H/P/F grading only.)—I, II, III, IV. Owings
(change in existing course—eff. summer 2001)

433. Surgery Continuum Clerkship (6)

(cancelled course—eff. spring 2001)

Medicine and Epidemiology (VME)**494. International Programs Seminar (1)**

Seminar—10 sessions. Prerequisite: D.V.M, M.P.V.M. or consent of instructor. Discussion, by veterinarians around the world, of aspects of veterinary medicine in their countries and regions, ranging from livestock to wildlife medicine to companion animal practice. May be repeated twice for credit. (S/U grading only.)—II. Hird
(change in existing course—eff. spring 2001)

Medieval Studies (MST)**20C. The Late Medieval and Early Modern Period (4)**

Lecture—3 hours; discussion—1 hour. The great transformations that created the modern world: Constitutional Government, the Hundred Years' War, the Black Death, and the Peasants' Revolts, the Renaissance, Reformation and Counter-Reformation, and the Baroque. GE credit: ArtHum, Wrt.
(change in existing course—eff. fall 2001)

Molecular Biosciences (VMB)**254. Toxicology of the Respiratory System (3)**

Lecture—27 hours; discussion—3 hours. Prerequisite: Pharmacology and Toxicology 201, 202, 203 or consent of instructor. Survey of structure and function of the respiratory system, the pathophysiology of major lung diseases, the interactions of toxicants with the lung and response of this organ to injury. Offered in alternate years.—II. Buckpitt
(new course—eff. winter 2001)

485. Advanced Clinical Nutrition (2)

Lecture—14 sessions; laboratory—1 session; discussion—4 sessions; project. Prerequisite: third year standing in the School of Veterinary Medicine or graduate students with consent of instructor. Advanced training in the principles and application of small animal clinical nutrition. (S/U grading only.)—II. Fascetti
(change in existing course—eff. winter 2002)

Music (MUS)**2A. Keyboard Competence, Part 1 (2)**

Performance—2 hours. Prerequisite: course 6A and 16A concurrently. Training to meet the minimum piano requirements for the major in music. All music majors will be expected to perform scales and simple harmonic progressions in twelve keys, both major and minor. (P/NP grading only.)—I. Triest
(change in existing course—eff. fall 2001)

2B. Keyboard Competence, Part 2 (2)

Performance—2 hours. Prerequisite: course 6B and 16B concurrently, course 2A or demonstration of required keyboard proficiency on diagnostic exam. Training to meet the minimum piano requirements for the major in music. The study of scales with both hands, harmonic progressions, and sight reading at the piano. (P/NP grading only.)—II. Triest
(change in existing course—eff. fall 2001)

2C. Keyboard Competence, Part 3 (2)

Performance—2 hours. Prerequisite: course 6C and 16C concurrently, course 2B or demonstration of required keyboard proficiency on diagnostic exam. Training to meet the minimum piano requirements for the major in music. The study of chord progressions, figured bass, sight reading, and piano repertoire. (P/NP grading only.)—III. Triest
(change in existing course—eff. fall 2001)

6A. Elementary Theory, Part 1 (3)

Lecture—3 hours. Prerequisite: admission by examination given at beginning of fall quarter; course 2A or 16A concurrently or demonstration of required proficiency level on diagnostic exam. Development of music writing and listening skills through the study of music fundamentals, species counterpoint, harmony, analysis of repertory. Intended primarily for music majors. Not open for credit to students who have completed course 4A.—I. Chang
(new course—eff. fall 2001)

6B. Elementary Theory, Part 2 (3)

Lecture—3 hours. Prerequisite: course 6A; course 2B or 16B concurrently or demonstration of required proficiency level on diagnostic exam. Development of music writing and listening skills through the study of music fundamentals, species counterpoint, harmony, analysis of repertory. Intended primarily for music majors. Not open for credit to students who have completed course 4B.—II. Chang
(new course—eff. fall 2001)

6C. Elementary Theory, Part 3 (3)

Lecture—3 hours. Prerequisite: course 6B; course 2C or 16C concurrently or demonstration of required proficiency level on diagnostic exam. Development of music writing and listening skills through the study of music fundamentals, species counterpoint, harmony, analysis of repertory. Intended primarily for music majors. Not open for credit to students who have completed course 4C.—III. Chang
(new course—eff. fall 2001)

7A. Intermediate Theory, Part 1 (3)

Lecture—3 hours. Prerequisite: course 6C. Homophonic music of the Classical era with a focus on analysis of music by Haydn, Mozart, and Beethoven. Composition of pieces in the homophonic forms such as Minuet and Trio, Theme and Variations, Rondo and Sonata. Intended for music majors. Not open for credit to students who have completed course 5B.—I. Bauer
(new course—eff. fall 2001)

7B. Intermediate Theory, Part 2 (3)

Lecture—3 hours. Prerequisite: course 7A. Nineteenth-century harmony and voice leading through the music of the Romantic era. Focus on analysis of music by Chopin, Schumann, Brahms, Wagner, and Wolf. Composition of character pieces and songs. Intended for music majors. Not open for credit to students who have completed course 5C.—II. Bauer
(new course—eff. fall 2001)

7C. Intermediate Theory, Part 3 (3)

Lecture—3 hours. Prerequisite: course 7B. The music of the first thirty years of the twentieth century and the various analytical tools pertaining to it. Works of Debussy, Stravinsky, Schoenberg, Berg, and others are discussed. Composition of small pieces for solo instruments, voice and piano. Intended for music majors. Not open for credit to students who have completed course 104A.—III. Bauer
(new course—eff. fall 2001)

16A. Elementary Musicianship, Part 1 (2)

Lecture/laboratory—2 hours. Prerequisite: course 6A concurrently, passing score on short diagnostic exam at the beginning of the quarter. The melodic, rhythmic, and harmonic materials of Western Music. Includes sight singing, explanations, drills, melodic/rhythmic/harmonic dictations, and listening analysis. Recommended for those who intend to major in music.—I. Craig
(new course—eff. fall 2001)

16B. Elementary Musicianship, Part 2 (2)

Lecture/laboratory—2 hours. Prerequisite: course 6B concurrently, course 6A or required proficiency level on diagnostic exam. The melodic, rhythmic, and harmonic materials of Western Music. Includes sight singing, explanations, drills, melodic/rhythmic/harmonic dictations, and listening analysis. Recommended for those who intend to major in music.—II. Craig
(new course—eff. fall 2001)

16C. Elementary Musicianship, Part 3 (2)

Lecture/laboratory—2 hours. Prerequisite: course 6C concurrently, course 16B or required proficiency level on diagnostic exam. The melodic, rhythmic, and harmonic materials of Western Music. Includes sight singing, explanations, drills, melodic/rhythmic/harmonic dictations, and listening analysis. Recommended for those who intend to major in music.—III. Craig
(new course—eff. fall 2001)

17A. Intermediate Musicianship, Part 1 (2)

Lecture/laboratory—2 hours. Prerequisite: course 16C or required proficiency level on diagnostic exam. The melodic, rhythmic, and harmonic materials of Western Music. Includes sight singing, explanations, drills, melodic/rhythmic/harmonic dictations, and listening analysis. Intended for music majors.—I. Craig (new course—eff. fall 2001)

17B. Intermediate Musicianship, Part 2 (2)

Lecture/laboratory—2 hours. Prerequisite: course 17A or required proficiency level on diagnostic exam. The melodic, rhythmic, and harmonic materials of Western Music. Includes sight singing, explanations, drills, melodic/rhythmic/harmonic dictations, and listening analysis. Intended for music majors.—II. Craig (new course—eff. fall 2001)

17C. Intermediate Musicianship, Part 3 (2)

Lecture/laboratory—2 hours. Prerequisite: course 17B or required proficiency level on diagnostic exam. The melodic, rhythmic, and harmonic materials of Western Music. Includes sight singing, explanations, drills, melodic/rhythmic/harmonic dictations, and listening analysis. Intended for music majors.—III. Craig (new course—eff. fall 2001)

24A. Introduction to the History of Music I (3)

Lecture—3 hours. Prerequisite: course 6A (may be taken concurrently). History of music from the late Baroque to Beethoven. Intended primarily for majors in music. GE credit: Wrt.—I. Busse Berger (change in existing course—eff. fall 2001)

24B. Introduction to the History of Music II (3)

Lecture—3 hours. Prerequisite: course 24A, course 6B (may be taken concurrently). The history of music from the Romantic Period to the nineteenth century. Intended primarily for majors in music. GE credit: Wrt.—II. Busse Berger (change in existing course—eff. fall 2001)

24C. Introduction to the History of Music III (3)

Lecture—3 hours. Prerequisite: course 24B, course 6C (may be taken concurrently). The history of music of the 20th century. Intended primarily for majors in music. GE credit: Wrt.—III. Busse Berger (change in existing course—eff. fall 2001)

101A. Advanced Theory, Part 1 (4)

Lecture—3 hours; lecture/laboratory—1 hour. Prerequisite: course 7C. Twentieth century music from 1930 through 1950 and the various analytical tools pertaining to it. Works of Copland, Sessions, Schoenberg, Bartok, and Stravinsky are discussed. Composition of small pieces for piano and voice. For music majors. Not open for credit to students who have completed course 104B.—I. Frank (new course—eff. fall 2002)

101B. Advanced Theory, Part 2 (4)

Lecture—3 hours; lecture/laboratory—1 hour. Prerequisite: course 101A. Music from 1950 to the present and the various analytical tools pertaining to it. Works of Babbit, Carter, Dallapiccola, Ligeti, Messiaen, Reich and others are discussed. Composition of small pieces for ensemble. Intended for music majors. Not open for credit to students who have completed course 104C.—II. Frank (new course—eff. fall 2002)

102. Tonal Counterpoint (4)

Lecture—3 hours; practice—1 hour. Prerequisite: course 7A and 17A. Imitative tonal counterpoint with an analytical focus on the Two Part Inventions and Fugues (from the Well Tempered Klavier) of J.S. Bach. Composition of exercises and short pieces using contrapuntal techniques. Intended for music majors. Not open for credit to students who have completed course 5A.—II. Bauer (new course—eff. fall 2001)

113. Introduction to Conducting (2)

Lecture—1 hour; performance—1 hour. Prerequisite: course 6C. Principles and techniques of conducting as they apply to both choral and instrumental ensembles. Not open for credit to students who have completed course 111 or 112. Offered in alternate years.—II. Holoman, Thomas (new course—eff. fall 2001)

114. Intermediate Conducting (2)

Lecture—1 hour; performance—1 hour. Prerequisite: course 113. Intermediate conducting with a continued focus on principles and techniques as they apply to both choral and instrumental ensembles. Offered in alternate years.—I. Holoman, Thomas (new course—eff. fall 2001)

124A. History of Western Music: Middle Ages to 1600 (3)

Lecture—3 hours. Prerequisite: course 6C and 24C. Historical survey of composers and musical styles from the Middle Ages to the beginning of the 17th century. GE credit: Wrt.—I. Nutter (change in existing course—eff. fall 2001)

124B. History of Western Music: 1600-1750 (3)

Lecture—3 hours. Prerequisite: course 124A. Historical survey of composers and musical styles from the late 1500s to the mid-18th century. GE credit: Wrt.—II. Nutter (change in existing course—eff. fall 2001)

Nematology (NEM)**150. Revising Scientific Prose (4)**

Lecture/discussion—3 hours; term paper. Prerequisite: one course in English composition, understanding of English grammar and parts of speech, upper division standing in a science major, or consent of instructor. Principles of detailed revision; close analysis of writing styles in research papers, popular scientific articles, and other scientific reports; use of verb-based and noun-based writing styles. GE credit: Wrt.—II. Jaffee (new course—eff. winter 2002)

Nutrition (NUT)**112. Nutritional Assessment: Dietary, Anthropometric, and Clinical Measures (3)**

Lecture—2 hours; laboratory—3 hours. Prerequisite: Animal Biology 102 and 103 or Nutrition 101, Nutrition 111 (may be taken concurrently), Statistics 13. Methods of human nutritional assessment, including dietary, anthropometric, biochemical and hematological techniques, and physical examination. Principles of precision, accuracy, and interpretation of results for individuals and populations.—III. Brown, Satre (change in existing course—spring 2002)

Physics (PHY)**9B. Classical Physics (4)**

Lecture—3 hours; laboratory—2.5 hours; discussion—1 hour. Prerequisite: course 9A, Mathematics 21C, 21D (may be taken concurrently). Continuation of course 9A. Fluid mechanics, thermodynamics, wave phenomena, optics. Only 2 units of credit to students who have completed course 7A. Not open for credit to students who have completed course 9HB, 9HC, or Engineering 105.—I. (change in existing course—eff. fall 2001)

9C. Classical Physics (4)

Lecture—3 hours; laboratory—2.5 hours; discussion—1 hour. Prerequisite: course 9B, Mathematics 21D, 22A (may be taken concurrently). Electricity and magnetism including circuits and Maxwell's equations. Only three units of credit allowed to students who have completed course 7C. Not open for credit to students who have completed course 9HD.—II. (change in existing course—eff. spring 2002)

Plant Pathology (PLP)**148. Introductory Mycology (4)**

Lecture—2 hours; laboratory—6 hours. Prerequisite: Biological Sciences 1A, 1B, 1C. Systematics, ecology, evolution, and morphology of fungi. Importance of fungi to humans. (Same course as Plant Biology 148.)—I. MacDonald, Rizzo (change in existing course—eff. fall 2001)

Political Science (POL)**226. Seminar in International Political Economy (4)**

Seminar—4 hours. Research in international political economy. Structure of the global economy, as well as specific dimensions of international economic relations, including trade, capital flows, global production structures, and migration. Offered in alternate years.—I. Money (new course—eff. fall 2001)

Pomology (POM)**10. Fruits and Nuts of California and the World (3)**

Lecture—3 hours. Field trip on seventh Saturday of quarter (1/2 day). Biological and environmental principles of tree-crop agriculture emphasizing California production. Topics include temperate and subtropical species, biotechnology and genetic improvement, environmental physiology, plant and crop growth, pest and disease control, consumer issues. GE credit: SciEng.—II. Polito (change in existing course—eff. winter 2002)

Population Biology (PBG)**287. Advanced Animal Behavior (2)**

Seminar—2 hours. Prerequisite: graduate standing and consent of instructor, courses in animal behavior (Neurobiology, Physiology, and Behavior 102 or the equivalent), and either evolution (Evolution and Ecology 100 or the equivalent) or ecology (Evolution and Ecology 101 or the equivalent). Reading, reports and discussion on current topics in animal behavior, with a focus on topics that lie at the interface between animal behavior, ecology and evolution. (Same course as Animal Behavior 287.) May be repeated twice for credit.—III. Stamps (new course—eff. spring 2002)

Population Health and Reproduction (PHR)**404. Medical Statistics III (4)**

(cancelled course—eff. winter 2002)

421. Veterinary Public Health (2)

(cancelled course—eff. spring 2000)

429B. Dairy Herd Health Management (4.6)

(cancelled course—eff. spring 2002)

429D. Dairy Herd Health Management (4)

Lecture—40 sessions. Prerequisite: Medicine and Epidemiology 427, 463A, 463B, 463C, third year standing in School of Veterinary Medicine, and consent of instructor. Practical systems for delivering veterinary services to dairy farms with emphasis on disease prevention and improved herd performance.—III. Moore (new course—eff. spring 2002)

429DL. Dairy Herd Health Management Laboratory (0.6)

Laboratory—6 sessions. Prerequisite: course 429D concurrently. Practical systems for delivering veterinary services to dairy farms with emphasis on disease prevention and improved herd performance. Field trips and computer laboratories to practice skills in animal observations, facilities observations and use of the computer for nutrition services and dairy records analysis. (S/U grading only.)—III. Moore (new course—eff. spring 2002)

429E. Dairy Goat Herd Health (1)

Lecture—10 sessions. Prerequisite: Medicine and Epidemiology 427, 463A, 463B, 463C, third year standing in School of Veterinary Medicine, and consent of instructor. The application of problem-solving and epidemiologic methods to dairy goat diseases and their control.—III. Rowe (new course—eff. spring 2002)

457. Veterinary Business Management (2)

Lecture—10 sessions. Prerequisite: first, second, third, or fourth year student in School of Veterinary Medicine or consent of instructor. Information essential to the successful management of a veterinary practice. Topics include basic accounting, medical recordkeeping, money management, business and personal insurance, client relations and tax law. (S/U grading only.)—III. Klingborg (change in existing course—eff. spring 2002)

Preventive Veterinary Medicine (MPM)**404. Medical Statistics III (4)**

Lecture—3 hours; laboratory—2 hours. Prerequisite: course 403 or the equivalent, consent of instructor. Analysis of time dependent variation and trends, analysis of multiway frequency tables; logistic regression; survival analysis selecting the best regression equation; biomedical applications.—II. Farver (new course—eff. winter 2001)

405L. Epidemiology Laboratory (1)

Laboratory—10 hours. Prerequisite: course 405 (may be taken concurrently) with grade of C or better, course 412 with grade B- or better. A practical application of epidemiological methods using the microcomputer as a tool to solve problems. Utilizes spreadsheets and databases as tools to organize and analyze data. Emphasis on epidemiological methods introduced in course 405. Data sets provided.—I. Case (change in existing course—eff. fall 2001)

408A. Veterinary Research: Planning and Reporting (2)

Lecture—16 sessions; laboratory—4 sessions. Prerequisite: course 402 or Statistics 102 (with grade B- or better), course 412 and 405 or the equivalent (may be taken concurrently), ability to use commercial software in statistical and graphical applications. Planning, critical analysis, ethics, and written and oral communication of veterinary research.—I. Thurmond
(new course—eff. fall 2001)

408B. Veterinary Research: Planning and Reporting (1)

Lecture—10 sessions. Prerequisite: course 408A. Planning, critical analysis, ethics, and written and oral communication of veterinary research.—II. Thurmond
(new course—eff. winter 2002)

Psychology (PSC)**142. Psychology of Social Development (4)**

Lecture—4 hours. Prerequisite: course 1, 41. Pass 1 open to Psychology majors. Theory and research on social development from childhood to adulthood. Topics include the development of personality, achievement motivation, self-understanding, sex-role identity, and antisocial behavior, with an emphasis on the interface between biological and social factors. Not open for credit to students who have completed course 114 or Human Development 102. GE credit: SocSci, Wrt.—I, II, III. Robins
(change in existing course—eff. winter 2002)

162V. Personality Theory (4)

World Wide Web virtual lecture—4 hours. Prerequisite: course 1, 41. The theories of Freud, Erikson, and other major twentieth-century contemporary approaches to personality. Not open for credit to students who have completed former course 147. GE credit: SocSci, Wrt.—Ericksen
(new course—eff. summer 2001)

Russian (RUS)**102. Russian Composition (4)**

Lecture/discussion—3 hours; tutorial—1 hour. Prerequisite: course 6 or consent of instructor. Practice in writing Russian. One composition on a different topic each week. Topics include history, geography, politics, and literature of Russia; comparison of Russian and American lifestyles; current events. Conducted in Russian. Offered in alternate years. GE credit: ArtHum.—II. Druzhnikov
(change in existing course—eff. winter 2002)

Science and Society (SAS)**90D. Saving Endangered Plant Species: Problems and Prospects (2)**

Seminar—2 hours. Endangered plant species illustrate the value of conservation biology. Topics include societal issues and plant germplasm conservation, comparisons to animal conservation issues, and the economics of and justification for preserving endangered plants.—I. Parfitt
(new course—eff. fall 2001)

91A. Explorations in Science and Society: Cultures and Identities (2)

Seminar—1 hour; extensive writing or discussion—1 hour. Prerequisite: participation in the summer Special Transitional Enrichment Program (STEP) or consent of instructor; course 1 concurrently. Exploration of linkages among identity and culture, multi-disciplinary inquiry, and agricultural and environmental science issues.—I. MacDonald
(new course—eff. fall 2001)

91B. Explorations in Science and Society: Leadership and Collaboration (2)

Seminar—1 hour; extensive writing or discussion—1 hour. Prerequisite: course 91A or consent of instructor. Extends understanding of culture and identity to issues of leadership, collaboration, and social action in science and society. Includes a mandatory two and half day retreat.—II. MacDonald
(new course—eff. winter 2002)

91C. Explorations in Science and Society: Engagement (2)

Seminar—1 hour; internship—3 hours. Prerequisite: course 91B or consent of instructor. Explorations of the concept of engagement in science and society from philosophical and practical perspectives. Exploration of the concept of engagement based on lectures, self reflection, discussions and three hours of K-12 school internships per week.—III. MacDonald
(new course—eff. spring 2002)

Sociology (SOC)**192. Internship and Research Practicum (2-6)**

Internship—6-18 hours. Prerequisite: course 46A, upper division standing, approval of proposed internship and course 193 concurrently or consent of instructor. Supervised internship and study in an agency, organization, or institution; application of sociological concepts to the work experience. May be repeated for credit with consent of instructor. Maximum of 4 units may be counted toward the major. (P/NP grading only.)
(change in existing course—eff. fall 2001)

193. Workshop in Field Research (2)

Lecture/discussion—2 hours. Prerequisite: course 46A, course 192 or 199 concurrently for 2-4 units, senior standing. Overview of the process of collecting, recording, analyzing, and reporting qualitative social data. Emphasis on application of principles; each participant completes an original research project. Not open for credit to students who have completed course 194HA.—I, II, III. Cramer
(new course—eff. fall 2001)

Statistics (STA)**231A. Mathematical Statistics I (4)**

Lecture—3 hours; discussion—1 hour. Prerequisite: course 131A, 131B, 131C, Mathematics 127A, 127B or the equivalent. First part of 3-quarter sequence on mathematical statistics. Emphasizes foundations. Topics include basic concepts in asymptotic theory, decision theory (e.g. risk function, Bayes and minimax optimality, Bayes estimation), and an overview of methods of point estimation.—I.
(change in existing course—eff. winter 2002)

231B. Mathematical Statistics II (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 231A. Second part of a 3-quarter sequence on mathematical statistics. Emphasizes large sample theory, e.g. asymptotics of MLE, likelihood-ratio-test and Chi-square-test, CLT with applications in (generalized) linear models. Classical hypothesis testing, e.g. Neyman-Pearson theory, UMP (unbiased)-tests.—II. (change in existing course—eff. winter 2002)

231C. Mathematical Statistics III (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: course 231A, 231B. Third part of 3-quarter sequence on mathematical statistics. Emphasizes large sample theory and their applications. Topics include statistical functionals (applications to L- and M-estimation); resampling methods (jackknife, bootstrap); curve estimation (density, regression, failure rate); rank tests, and one instructor-selected topic.—III. (change in existing course—eff. spring 2002)

232A. Applied Statistics I (4)

Lecture—3 hours; laboratory—1 hour. Prerequisite: course 106, 108, 131A, 131B, 131C, Mathematics 167. Estimation and testing for the general linear model, ANOVA design, model validation, variable selection, and analyzing data with the linear model.—I. (change in existing course—eff. fall 2001)

232B. Applied Statistics II (4)

Lecture—3 hours; laboratory—1 hour. Prerequisite: course 232A. Estimation and testing for the general linear mixed model, Bayesian hierarchical modeling, nonparametric modeling, analyzing data and designing experiments with respect to these models.—II. (change in existing course—eff. winter 2002)

232C. Applied Statistics III (4)

Lecture—3 hours; laboratory—1 hour. Prerequisite: course 232B. Multivariate analysis: multivariate distributions, multivariate linear models, data analytic methods including principal component, factor, discriminant, cluster, and canonical correlation analyses, non-parametric methods, regression trees, and Bayesian methods.—III. (new course—eff. spring 2002)

Surgical and Radiological Sciences (VSR)**423. Comparative Ophthalmology (1.5)**

Lecture—15 sessions. Prerequisite: Veterinary Medicine 422, third year standing in School of Veterinary Medicine or consent of instructor. The diagnosis and treatment of commonly encountered eye diseases of common domestic animals.—III. Maggs (change in existing course—eff. spring 2002)

423L. Small Companion Animal Ophthalmology Laboratory (0.3)

(cancelled course—eff. spring 2002)

463L. Small Animal Soft Tissue Surgery and Anesthesia Laboratory (0.6)

Laboratory—6 hours. Prerequisite: Veterinary Medicine 407, 407L, course 463 concurrently, third year standing in School of Veterinary Medicine. Priority given to Small Animal Track students. Applied surgical anatomy and physiology and operative surgical exercises which cover common emergency surgical procedures. (S/U grading only.)—III. Gregory (change in existing course—eff. spring 2002)

Vegetable Crops (VCR)**220. Genomics and Biotechnology of Plant Improvement (3)**

Lecture—3 hours. Prerequisite: Biological Sciences 101 or the equivalent. Integration of modern biotechnology and classical plant breeding including the impact of structural, comparative and functional genomics on gene discovery, characterization and exploitation. Also covers molecular markers, plant transformation, hybrid production, disease resistance, and novel output traits. (Same course as Genetics 220.)—II. Michelmore (change in existing course—eff. winter 2002)

Veterinary Medicine (VMD)**403. Physiological Chemistry (6.1)**

Lecture—52 sessions; laboratory—3 sessions; discussion—6 sessions. Prerequisite: first year standing in School of Veterinary Medicine. Biochemical principles used to analyze problems and to evaluate metabolic relationships important in animal health and pathophysiology. Integrative approach, emphasizing controls of major metabolic pathways, molecular basis of gene expression, tumorigenesis and signal transduction.—I. Hansen (change in existing course—eff. fall 2001)

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

Laboratory—14 sessions. Prerequisite: course 426, third year standing in School of Veterinary Medicine. Introduction to surgical anatomy, operative and anesthetic skills. (Deferred grading only, pending completion of sequence. S/U grading only.)—I, II. Gregory, Ilkiw (change in existing course—eff. fall 2001)

422. Veterinary Ophthalmology (1.9)

Lecture—17 sessions; laboratory—2 sessions. Prerequisite: third year standing in School of Veterinary Medicine. The eye and related structures. Basic anatomy and physiology with clinically relevant aspects emphasized. Presentation of clinical appearance of common pathological changes. Specific diseases frequently encountered in general practice, including signs, causes, diagnostic approach, and treatment philosophy.—II. Hollingsworth (change in existing course—eff. winter 2002)

430. Principles of Radiography and Radiologic Interpretation (3.5)

Lecture—24 sessions; laboratory—1 session; 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. Long (change in existing course—eff. fall 2000)

431. Endocrinology (1.8)

Lecture—17 sessions; laboratory—1 session. Prerequisite: first-year standing in the School of Veterinary Medicine. The structure and function of endocrine glands and how hormones and cytokines influence physiological processes.—III. Benton (change in existing course—eff. fall 2001)

434. Basic Veterinary Hematology (2)

Lecture—14 sessions; laboratory—6 sessions. Prerequisite: second year standing in School of Veterinary Medicine. The regulation of production of blood cells, the morphology of bone marrow and hematopoietic cells, the morphology and function of blood cells and the activities of hemostasis.—I. Zinkl
(new course—eff. fall 2001)

435. Veterinary Clinical Pathology (3.3)

Lecture—22 sessions; laboratory/discussion—11 sessions. Prerequisite: second year standing in School of Veterinary Medicine. The principles, selection, use, interpretation, and limitations of laboratory tests used for the diagnosis and monitoring of disease in animals.—II. Christopher
(new course—eff. winter 2002)

435A. Clinical Hematology (3.7)

(cancelled course—eff. fall 2001)

435B. Cytology and Clinical Chemistry (2.5)

(cancelled course—eff. winter 2002)

Wildlife, Fish, and Conservation Biology (WFC)**141. Behavioral Ecology (4)**

Lecture—3 hours; film viewing—1 hour. Prerequisite: Evolution and Ecology 101. Basic theories underlying the functional and evolutionary significance of behavior, and the role of ecological constraints. Supporting empirical evidence taken mainly from studies of wild vertebrates. Offered in alternate years.—II. Caro
(change in existing course—eff. winter 2002)

190. Departmental Research Seminar (1)

Seminar—1 hour. Prerequisite: upper division standing in the biological sciences. Reports and discussions of recent advances related to wildlife and fisheries biology. May be repeated for credit up to 3 times. (P/NP grading only.)—I, II, III.
(change in existing course—eff. fall 2001)