optimization problems and multi-agent dynamic
games, with a focus on applications to issues rele-
vant to the environment, natural resources,
agriculture, and development.—II. (II.)

256A. Applied Econometrics I (4)
Lecture—4 hours. Prerequisite: course 106 or Eco-
nomics 140; or consent of instructor. First of two
courses in the Masters-level econometrics sequence. The linear regression model and generalizations are applied to topics in agricultural and resource econo-

mics. Tools for empirical research for problems requiring more sophisticated tools than standard regression models are emphasized.—I. (I.)

256B. Applied Econometrics II (4)
Lecture—4 hours. Prerequisite: course 256A or con-
sent of instructor. Second of two courses in the Mas-
ters-level econometrics sequence. The linear regres-
sion model and generalizations are applied to topics in agricultural and resource economics. Tools for empirical research for problems requiring more sophisticated tools than standard regression models are emphasized.—II. (II.)

258. Demand and Market Analysis (4)
Lecture—4 hours. Prerequisite: courses 204A and
256 or consent of instructor. Application of theoretic-
al material covered in 204A/8, with particular focus on production theory/factor demand and	imperfect competition/market power. Use of theoretic-
al models as a foundation for empirical economic analysis, and empirical exercises. Independent research on chosen topics, with empirical applica-
tion.—III. (III.)

275. Economic Analysis of Resource and
Environmental Policies (4)
Lecture/discussion—4 hours. Prerequisite: course
204A. Development of externality theory, market	failure concepts, welfare economics, theory of	renewable and non-renewable resource use, and
typical economic models. Applications to policy	issues regarding the agricultural/environment inter-
terface and managing resources in the public domain. (Same course as Environmental Science and Policy 275.)—II. (II.)

276. Environmental Economics (4)
Lecture—3 hours; discussion—1 hour. Prerequisite:
course 204A or consent of instructor. Applications of	externality theory to the design of efficient environ-
ment policies. Evaluation of pollution control policy	instruments in light of information limitations and	market imperfections. Methods for nonmarket valu-
ation of the benefits of environmental improvement.

277. Natural Resource Economics (4)
Lecture—4 hours. Prerequisite: course 254 or con-
sent of instructor. Application of capital theory and
dynamic methods to issues of optimal use of renew-
able and nonrenewable resources. Examination of	policy issues associated with forests, fisheries, 
groundwater, energy resources, watersheds, soil, global climate, and wildlife.—III. (III.)

290. Topics in Agricultural and Resource	Economics (3)
Lecture—3 hours. Selected topics in agricultural and	resource economics, focusing on current research. May be repeated 4 times for credit. Offered irregu-
larly.

293. Analysis of California Agriculture and	Resources (3)
Lecture—1.5 hours; fieldwork—45 hours total, inclu-
ding one 5-day summer field trip. Review and	analysis of production, marketing, and resource	issues facing agricultural firms in California. Appli-
cation of economic theory and measurement to indi-
vidual firm and industry decisions in an applied	setting. (S/U grading only.)—I. (I)

298. Directed Group Study (1-5)
Advanced study through special seminars, informal
group discussions, or research group on problems for	analysis and experimentation. Sections: (1) Manage-
trial Economics; (2) Agricultural Policy; (3) Commu-
nity and Regional Development; (4) Natural	Resources; (5) Human Resources; (6) Research Meth-
ods and Quantitative Analysis.

299. Individual Study (1-12)
Sections: (1) Managerial Economics; (2) Agricultural	Policy; (3) Community and Regional Development;	(4) Natural Resources; (5) Human Resources; (6)
Research Methods and Quantitative Analysis; and	(7) Dissertation Research Prospectus. (S/U grading	only.)

299D. Special Study for Doctoral	Dissertation (1-12)
(S/U grading only.)

Professional

396. Teaching Assistant Training Practicum	(1-4)
Prerequisite: graduate standing. May be repeated	for credit. (S/U grading only.)

Agricultural Systems and	Environment

American Studies Studies

(Office of Undergraduate Studies)

Pre-Fall 2011 General Education (GE): Environ-
tmental Studies 1C, or equivalent; completion of
minimum of six units from the following:

- Plant Sciences 110A, 110C, 110L, 112,
  Entomology 110, 170A, 170B, 172, 170C
- Soil Science 100
- Sustainable Agriculture track

Minor Advisers: T. Gradziel (Plant Sciences)
Advising Center is located in 1220A Plant and
Environ Sciences 300-752-1715.

Agronomy

See Plant Sciences, on page 476.

Agronomy and Range Science

See Plant Sciences, on page 476.
museum curatorship, and business. Students discover new career possibilities through their internships in American institutions.

A.B. Major Requirements:

**Preparatory Subject Matter**

<table>
<thead>
<tr>
<th>Units</th>
<th>American Studies</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One additional lower division American Studies course</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>One course from: American African and African Studies 1, Asian American Studies 1, Chicana/o Studies 10, Native American Studies 1, or an equivalent course in racial and ethnic diversity</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>One course from: Anthropology 2, Women's Studies 50, or an equivalent course in social science approaches to culture</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>One course from: English 30A, 30B, Film Studies 1, or an equivalent course introducing critical approaches to literary and visual texts in the humanities</td>
<td>4</td>
</tr>
</tbody>
</table>

**Depth Subject Matter**

<table>
<thead>
<tr>
<th>Units</th>
<th>American Studies 100 and 160</th>
<th>80</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>American Studies Electives: Three additional upper-division American Studies courses</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Emphasis</td>
<td>20</td>
</tr>
</tbody>
</table>

In consultation with the American Studies Undergraduate Adviser, the student designs a program of 20 units (typically five courses) of upper division coursework: a unifying theme or subject in American culture. The courses should come from two or more departments or programs and can include up to 8 units of American Studies courses. Only 4 units of course 192 (undergraduate research) can be included in the emphasis. The student may choose the senior thesis option [190A, 190B] for up to 8 units of the emphasis and take the writing 12 units outside the program.

**Total Units for the Major**

| Units | 64 |

**Recommended**

Completion of the college requirement in English composition before enrollment in American Studies 190A.

**Minor Program Requirements:**

<table>
<thead>
<tr>
<th>Units</th>
<th>American Studies</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>American Studies, upper division</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>No more than 8 units from course 192 may be counted toward this total.</td>
<td></td>
</tr>
<tr>
<td>Faculty Advisers</td>
<td>C. Billekoff, C. Kaplan, E. Smoodin, J. Sze, G. Wang</td>
<td></td>
</tr>
</tbody>
</table>

**Courses in American Studies (AMS)**

**Lower Division**

| 1A. Science and American Culture (4) | Lecture—3 hours; discussion—1 hour. American science as a cultural system. Mutual influence and interaction of the system with other cultural systems including religion, social thought, art, architecture, literature, music, and science. ArtHum or SocSci, Div, Wtr I, ACGH, AH or SS, DD, WE—I. |
| 1B. Religion in American Lives (4) | Lecture—3 hours; discussion—1 hour. Religions and spiritual practices in the United States, and their interrelationships with other aspects of U.S. history, society, and culture; indigenous and imported faiths, and the impact of immigration, colonization, and culture contact on American cultures. GE credit: ArtHum or SocSci, Div, Wtr I, ACGH, AH or SS, DD, WE—I (I). |

**1C. American Lives Through Autobiography (4)**

| Lecture—3 hours; discussion—1 hour. American culture as understood through the individual life stories told by Americans, with attention to the roles of gender, race, ethnicity, social class, and sexual orientation in the individual's life course. GE credit: ArtHum or SocSci, Div, Wtr II | ACGH, AH or SS, DD, WE—I. |

**1E. Nature and Culture in America (4)**

| Lecture—3 hours; discussion—1 hour. Uses and abuses of nature in American history; patterns of inhabitation, exploitation, and neglect; attention to California; emphasis on metaphor as a key to understanding the natural world; attention to environmental heritage, ecology, and the "right" movement. Offered in alternate years. GE credit: ArtHum or SocSci, Div, Wtr I | ACGH, AH or SS, DD, WE—I. |

**4. Freshman Seminar (2)**

| Seminar—2 hours. Prerequisite: open only to students who have completed fewer than 40 quarter units. Investigation of a special topic in American Studies through shared readings, discussions, written assignments, and special activities (such as fieldwork, site visits). Emphasis on student participation in learning. Limited enrollment | II, III, IV. |

**5. Technology in American Lives (4)**

| Lecture—2 hours; discussion—2 hours. Prerequisite: completion of Subject A requirement. Technology as both a material cultural force and a symbol in American culture; the lives of engineers at work and play; images of the engineer and technology in popular culture; social political and ethical issues raised by technology. GE credit: ArtHum or SocSci, Div, Wtr II | ArtHum or SocSci, Div, Wtr I | ACGH, AH or SS, DD, WE—I. |

**10. Introduction to American Studies (4)**

| Lecture—3 hours; discussion—1 hour. United States history, culture, and society. Examination of cultural objects and social practices. Topics include popular culture (film, TV, Internet), cultural diversity, social activism, play, and communication. GE credit: GE credit: ArtHum or SocSci, Div, Wtr II | ACGH, AH or SS, DD, WE—I (I). |

**21. Objects and Everyday Life (4)**

| Lecture—3 hours; discussion | term paper. Prerequisite: completion of Subject A requirement. Material culture (objects and artifacts ranging from everyday objects like toys and furnishing to buildings and constructed landscapes) as evidence for understanding the everyday (vernacular) lives (gender, social class, ethnicity, region, age, and other factors); collecting and displaying material. Offered in alternate years. GE credit: ArtHum, Div, Wtr II | ACGH, AH or SS, DD, WE—I. |

**25. United States as a Business Culture (4)**

| Lecture—3 hours; discussion—1 hour. Prerequisite: completed Subject A requirement. Business as a cultural system and its relation to religion, politics, arts, science, technology, and material culture; business themes of success, creativity, innovation, and competition in American popular fictions, fiction, advice literature, film, and television; cultures of the workplace; multinational business. GE credit: ArtHum or SocSci, Div, Wtr I | ACGH, AH or SS, DD, WE—I. |

**30. Images of America and Americans in Popular Culture (4)**

| Lecture—3 hours; discussion—1 hour. Investigation of verbal and visual discourse about American identity in popular culture, including film, television, radio, music, fiction, art, advertising, and commercial experiences; discourses about the United States in the popular culture of other societies. Offered in alternate years. GE credit: ArtHum or SocSci, Div, Wtr II | ACGH, AH or SS, DD, WE—I. |

**55. Food in American Culture (4)**

| Lecture—3 hours; discussion—1 hour. Prerequisite: completed Subject A requirement. Food as a cultural system in the United States; food in the performance of individual and group identity, including gender and ethnicity; food in literature, art, popular culture (film, television, advertising), and folk culture; the food industry and business. GE credit: ArtHum or SocSci, Div, Wtr II | ACGH, AH or SS, DD, WE—I. |

Quarterm Offered: I-Fall, II-Winter, III-Spring, IV-Summer. 2015-2016 offering in parentheses.


Fall 2011 and on Revised General Education (GE): AH—Arts and Humanities; SE—Science and Engineering; SS—Social Sciences; ACGH—American Cultures, DD—Domestic Diversity, OL—Oral Skills, QL—Quantitative, SL—Scientific, VL—Visual, WC—World Cultures, WE—Writing Experience

59. Music and American Culture (4)

| Lecture—3 hours; discussion—1 hour. Prerequisite: completed Subject A requirement. An examination of music and American culture. Courses will explore music in its cultural contexts, which may include examinations of recording and broadcasting, of race, class, and gender, the role of technology, and relationships between musical production, consumption, and listening. GE credit: ArtHum or SocSci, Div, Wtr | ACGH, AH or SS, DD, WE—I. |

95. Careers and Identity in American Culture (2)

| Lecture—1 hour; discussion—1 hour. Defining one's identity through the career. The life course, preparation, and choices. Personality and career. Ethics. Gender, ethnicity, sexuality, and social class in the workplace. The transnational workplace. Conflict between the career and other social roles | I, II, III, IV. |

98. Directed Group Study (1-5)

| Prerequisite: consent of instructor. (P/NP grading only) |

99. Individual Study for Undergraduates (1-5)

| P/NP grading only. |

**Upper Division**

100. Methods in American Studies (4)

| Lecture/discussion—3 hours; term paper. Design and implementation of interdisciplinary research, analysis and writing for American Studies and other cultural studies fields. Library and research skills, project/problem definition, methods for study of texts, individuals, communities. HAND-on, skill-building, focused reading, discussion. |

101A-H. Special Topics (4)

| Seminar—3 hours, intensive reading, writing, and special projects. Interdisciplinary group study of special topics in American Culture Studies, designed for non-majors as well as majors. Content will vary according to the instructor and in accord with the following titles: (A) Popular Culture Studies; (B) Women's Studies; (C) Material Aspects of American Culture; (D) American National Character; (E) American Lives Through Autobiography; (F) The Interrelationship Between Arts and Ideas; (G) New Directions in American Culture Studies; (H) Problems in Cross-Cultural American Studies. May be repeated for credit in different subject area only | I, II, III, IV. |

110. A Decade in American Civilization (4)

| Lecture—2 hours; discussion—2 hours. Prerequisite: one of courses 1A, 1B, 1C, 1D, 1E or 1F. Close examination of a single decade in American civilization; the connections between the history, literature, arts, customs, and ideas of Americans living in the decade. Issues and representations of race, class, gender, age, and sexuality in the decade. May be repeated for credit if decades studied are different. GE credit: ArtHum or SocSci, Div, Wtr I | ACGH, AH or SS, DD, WE—I. |

120. American Folklore and Folklife (4)

| Lecture—3 hours; fieldwork—1 hour. Theory and method of the study of American folk traditions, including oral lore, customs, music, and material folk culture; the uses and meanings of those traditions in various communities, including families, ethnic institutions, voluntary organizations, and occupational groups. GE credit: ArtHum or SocSci, Div, Wtr I | ACGH, AH or SS, DD, WE—I. |

120. American Folklore and Folklife (4)

| Lecture—2 hours; discussion—1 hour; fieldwork—1 hour. Prerequisite: one course chosen from course 120, Anthropology 2, Psychology 16, or Sociology 1; consent of instructor. Exploration of the small group cultures of American culture work forces, including the role of environment, stories, jokes, rituals, ceremonies, personal style, and play. The effects | II, III, IV. |
of cultural diversity upon corporate cultures, both from within and in contact with foreign corpora-

130. American Popular Culture (4) Lecture/discussion—3 hours; fieldwork—1 hour. Prereq-
rquisite: course 1 or upper division standing. American popular expression and experience as a cultural system, and its relationship between this system and elite and folk cultures. Exploration of the
tories and methods for discovering and interpreting symbols in American thought, as found in folklore,

155. Eating in America (4)
Wrt | ACGH, AH or SS, DD, WE.—I. (I.) Smoadin

158. Technology and the Modern American Body (4) Lecture/discussion—3 hours; term paper. Prerequi-
site: Technocultural Studies 1 and either course 1A or 1B. The theory and analysis of the relationships
between human bodies and technologies in modern society. Dominant and eccentric examples of how
human bodies and technologies influence one another and reveal underlying cultural assumptions.
(Same course as Technocultural Studies 158.) GE credit: GE credit: ArtHum | ACGH, AH, WE.—I, II. Sze

160. Undergraduate Seminar in American Studies (4) Seminar—3 hours; term paper. Prerequisite: open to
junior and senior American Studies majors only. Intensive reading, discussion, research, and writing by
small groups in selected topics of American Studies scholarship; emphasis on theory and its applica-
tion to American material. Limited enrollment. May be repeated one time for credit when content dif-
fers.—II. (I, II, III.)

190A. Senior Thesis Research Seminar (4) Seminar—2 hours; extensive writing. Prerequisite:
seminar standing in American Studies major. Research and prospectus writing for senior thesis.—I. (I) Sze, Wang

190B. Senior Thesis (4) Independent study—12 hours. Prerequisite: senior standing in American Studies major and course 190A. In consultation with advisor, student writes an extended research paper on a topic proposed in
course 190A.—I, II, III, (I, II, III.)

192. Internship in American Institutions (1-12) Internship—1-12 hours. Prerequisite: enrollment
dependent on availability of intern positions, with priority to American Studies majors. Supervised
intership and study within and about key organiza-
tions in American civilization at archives, museums,
schools, historical societies, governmental and social
agencies, with attention to the techniques of participat
observation and the collection of ethnog
raphical data. May be repeated for credit for a total of 12 units. (P/NP grading only)

197T. Tutoring in American Studies (1-5) Tutorial—1-5 hours. Prerequisite: consent of Chair-
person of American Studies Program. Tutoring in lower division American Studies courses, usually
in small discussion groups. Periodic meetings with the instructor in charge, reports and readings. May be
repeated for credit when the tutoring is for a different
course. (P/NP grading only)

199. Directed Group Study (1-5) Prerequisite: consent of instructor. (P/NP grading only)

199. Special Study for Advanced Undergraduates (1-5) Prerequisite: consent of instructor and chairperson of American Studies Program. (P/NP grading only)

Graduate

220. American Folklore and Folklife (4) Seminar—3 hours; term paper. Prerequisite: gradu-
ate standing or consent of instructor. Theory and methods for the study of the folklore and the folk cus-
tomy behavior of Americans; contributions of folk-
life studies to scholarship in humanities and social
science disciplines.—III. (III.) Turner

250. Cultural Study of Masculinities (4) Seminar—3 hours; term paper. Prerequisite: gradu-
ate standing or consent of instructor. Interdisciplinary approaches to understanding the social and cultural
construction of masculinities; attention to the effects
of biology, gender, race, class, sexual and national
identities; criticism of oral, printed, visual, and mass
mediated texts, and of social relations and struc-
tures. (Same course as Women’s Studies 250.)—I,

255. Food in American Culture (4) Seminar—3 hours; term paper. Prerequisite: gradu-
ate standing or advanced undergraduate with con-
sent of instructor. Interdisciplinary theory and methods for the study of food in American culture; food
studies in relation to issues of identity (age, gender, ethnicity, religion, region, etc.), social rela-
tions, systems of production, and cultures of con-
sumption. Offered irregularly. Biltekoff, de la Pena

298. Group Study in Animal Biology (1-5) Prerequisite: graduate standing.

299. Individual Study (1-12) Prerequisite: consent of instructor. (S/U grading only)

Professional

396. Teaching Assistant Training Practicum (1-4) Prerequisite: graduate standing. May be repeated
for credit. (S/U grading only.)—I, II, III, (I, II, III.)

Anatomy

See Anatomy, Physiology and Cell Biology on page 149; and Courses in Cell Biology and Human Anatomy (CHA), on page 401.

Anesthesiology and Pain Medicine

See Medicine, School of, on page 396.

Animal Behavior (A Graduate Group)

Thomas P. Coombs-Hahn, Ph.D., Chairperson of the Group

Group Office. 310 Life Sciences
530-752-2981; Fax 530-752-8022; animalbehavior@biology.ucdavis.edu
http://biosci3.ucdavis.edu/GradGroups/ANB/
Faculty. The Group includes faculty from 12 depart-
ments in five schools and colleges.

Graduate Study. The Ph.D. program in Animal Behavior is an interdepartmental program focusing on the mechanisms underlying and evolution of behavior, and applications of animal behavior to current problems in conservation biology and animal welfare. The program trains students for teaching and research in a variety of areas, including anthro-
pology, animal science, ecology, entomology, neuro-
biology, psychology, physiology, veterinary science,
wildlife biology, and zoology. Resources available to
students, in addition to various departmental facil-
ties, include those of the California National Primate
Research Center, Bodega Marine Laboratory, and the
UC Natural Reserve System.

Quarter Offered: I-Fall, II-Winter, III-Spring, IV-Summer. 2015-2016 offering in parentheses
Pre-Fall 2011 General Education (GE): ArtHum—Arts and Humanities; SciEng—Science and Engineering; SocSci—Social Sciences;
ACGH—American Cultures; DD—Domestic Diversity; OL—Oral Skills; QL—Quantitative; SL—Scientific; VL—Visual; WC—World Cultures; WE—Writing Experience

Fall 2011 and on Revised General Education (GE): AH—Arts and Humanities; SE—Science and Engineering; SS—Social Sciences;
ACGH—American Cultures; DD—Domestic Diversity; OL—Oral Skills; QL—Quantitative; SL—Scientific; VL—Visual; WC—World Cultures; WE—Writing Experience

Anatomy

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